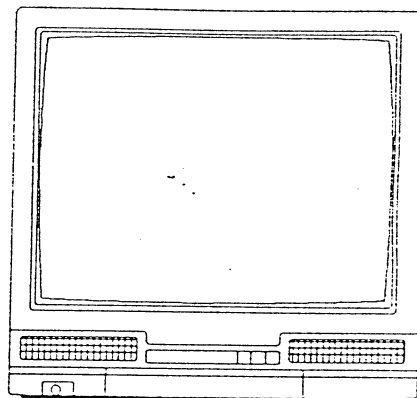


SERVICE MANUAL

MODEL: CX558WT/CHEMX
CHASSIS: P-88MT (MTTS2)

COLOUR TELEVISION RECEIVER



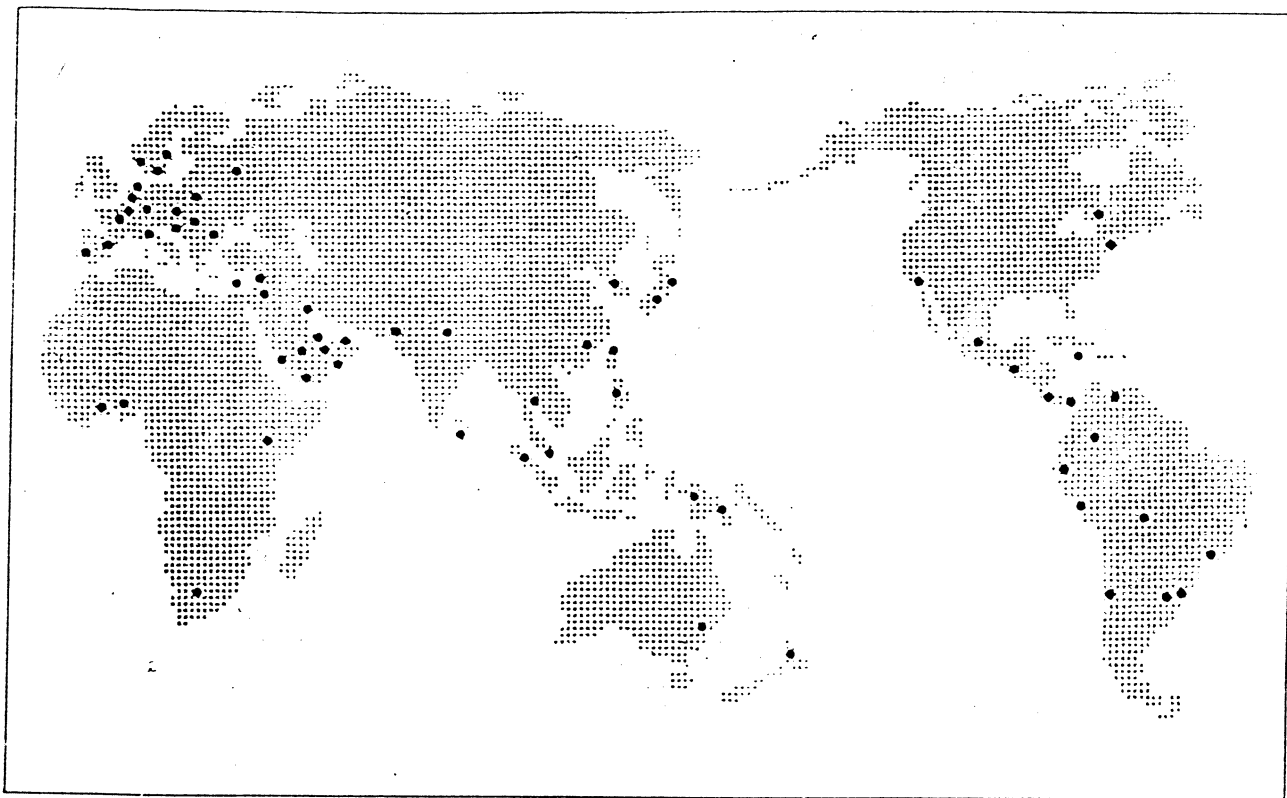
SPECIFICATION

Television System	PAL - B/G , SECAM - B/G
Receiving Channel	VHF : 2 - 12 UHF : 21 - 69
Intermediate Frequency	Picture I-F Frequency : 38.9MHz Sound 1 I-F Carrier Frequency : 33.4MHz Sound 2 I-F Carrier Frequency : 33.16MHz Pilot Carrier Frequency : 54.6873KHz Colour Sub-carrier Frequency : 34.47MHz
Picture Tube	54GGB98X
Power Requirements	220V , 50Hz
Power Consumption	95 WATT
Speaker	Impedance : 8 Ohm , 3W + 3W
Features	P88MT & RM104 REMOCON SYSTEM

SAFETY CAUTION :

Before servicing this chassis, it is important that a service technician reads and follows the "Safety Precaution" and "Product Safety Notice" in this Service Manual.

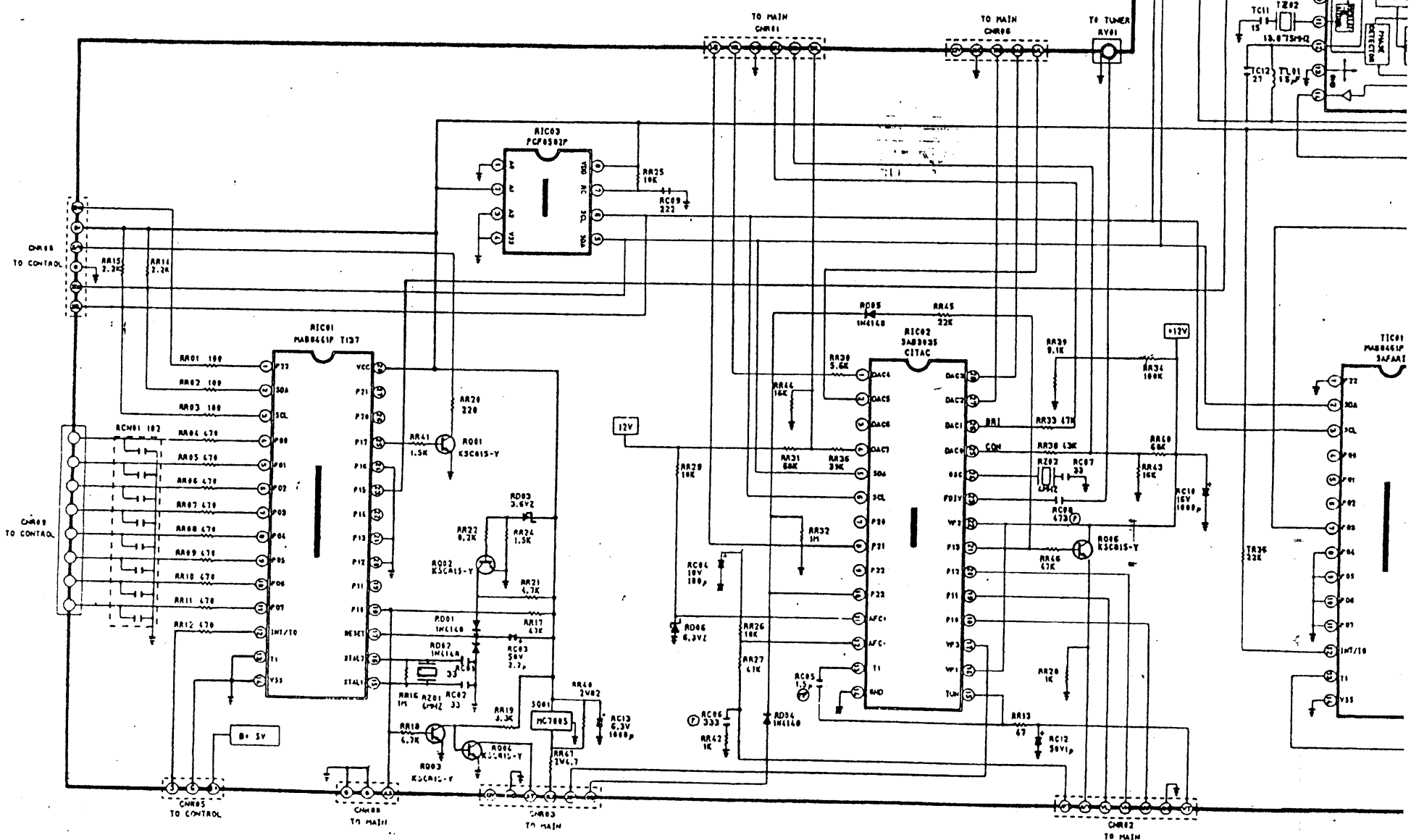
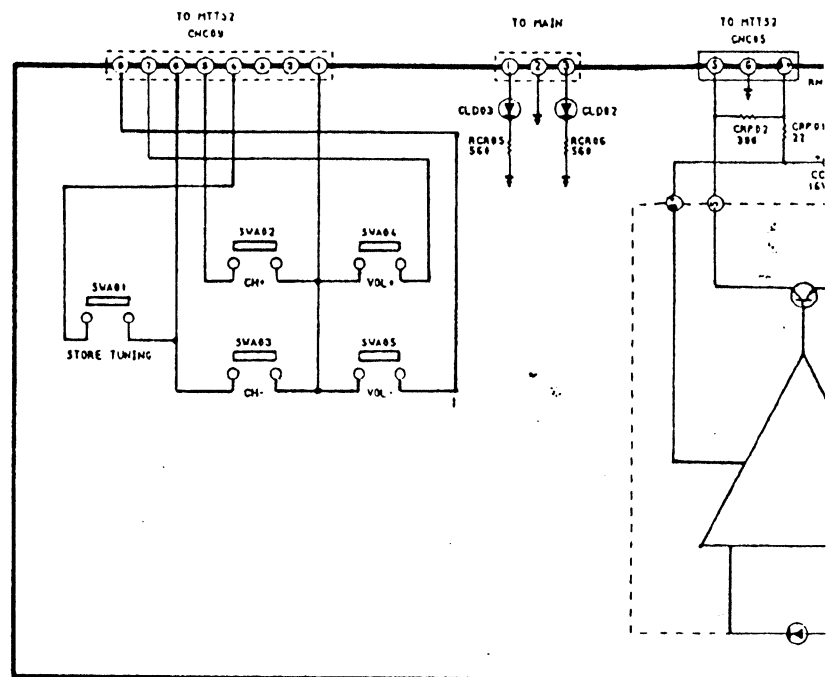
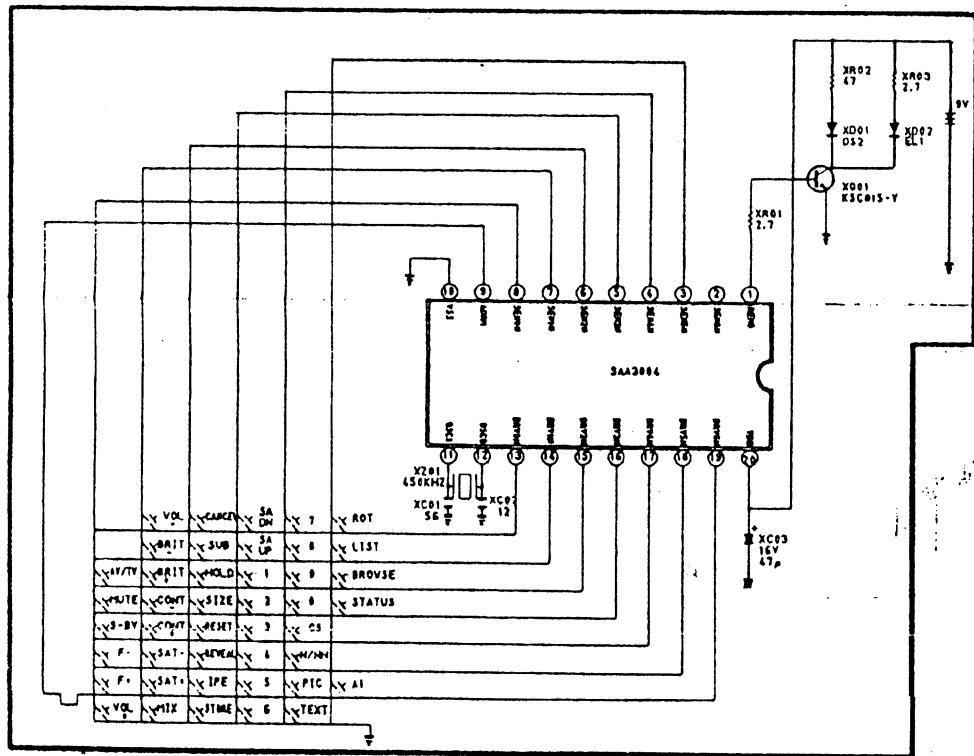
- For continued X-radiation, replace the picture tube with original type.
- Design and specifications are subject to change without prior notice.
- WARNING-SHOCK HAZARD - use isolation transformer when servicing.

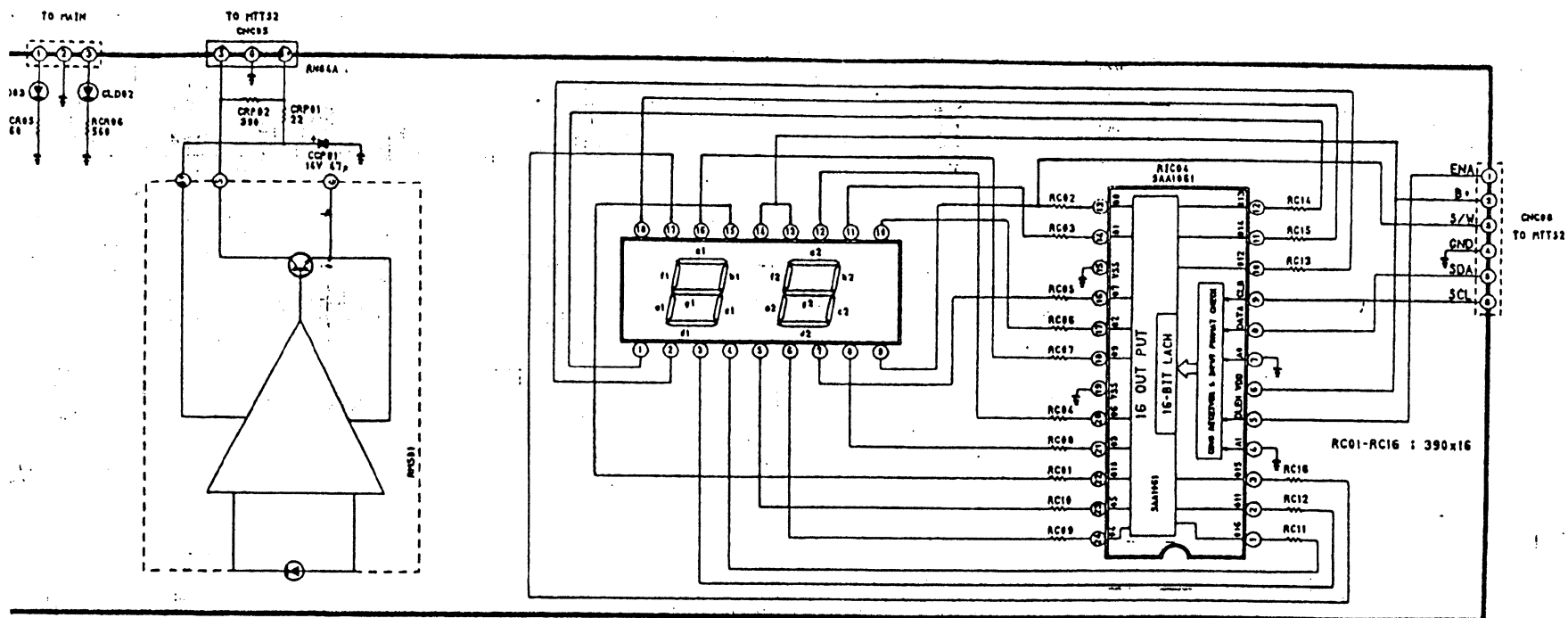


International Service Network

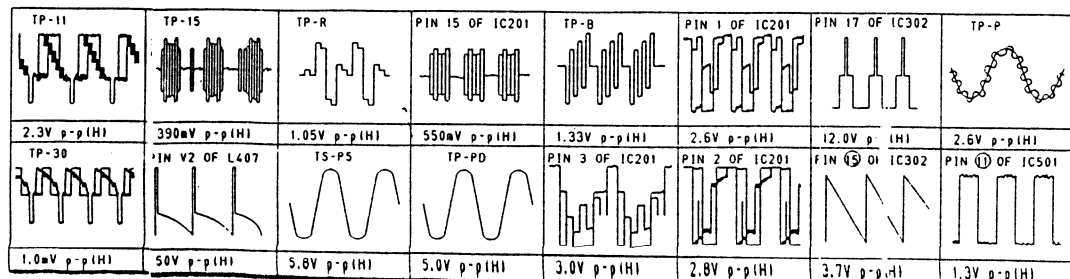
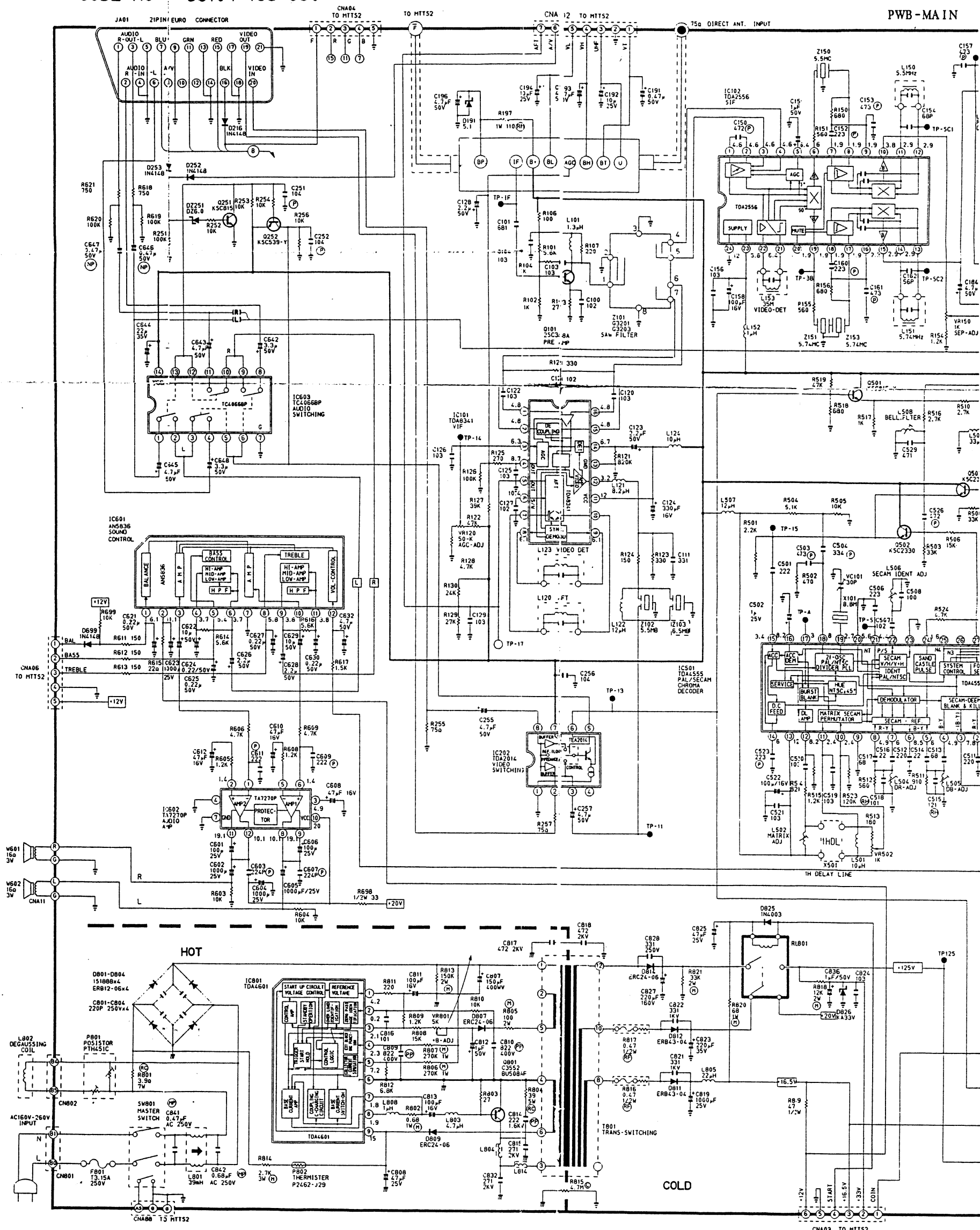
Nation	Center Name	City	Tel. No.	Nation	Center Name	City	Tel. No.	Nation	Center Name	City	Tel. No.
Asia and Middle East				Thailand	Samsung Service Center	Bangkok	(66-2) 294-0281	Spain	Samsung Electronica Espanola	Barcelona	(34-3) 864-9900
Australia	Samsung Electronics Australia Pty Ltd.	Sydney	(61-2) 638-5200	United Arab Emirates	JUMA Al Majid Est. Service Center	Dubai	(971-4) 66-1821	Sweden	Barcom	Bromma	(46-8) 98-1600
Bahrain	Al Zayani Commercial Service	Manama	(973) 27-1041	Yemen	Al Zubedi Trading House	Sana'a	(967-2) 24-2366	U.S.S.R.	Orbita	Moscow	(7-095) 276-4721
Hong Kong	Hutchison Boag Industry Ltd.	Wong Hang	(852-5) 55-4655	Europe & Africa				Yugoslavia	RIZ	Zagreb	(38-11) 41-3481
India	Texta Service Center	New Delhi	(91-11) 683-8018	Austria	Lus Rieder	Vienna	(43-222) 38-7536	America			
Indonesia	Nusantara	Medan	(62-61) 52-5844	Belgium	Amto Electronics Co.	Burcht	(32-03) 252-5000	Argentina	Noblex Argentina S.A.	Buenos Aires	(541-4) 86-1139
Japan	Tokyo Service Center Osaka Service Center	Tokyo Osaka	(81-3) 640-7231 (81-6) 23-0114	Bulgaria	Bitova	Sofia	(359-2) 80-1218	Bolivia	Electronica Sonitel	Santa Cruz	(591-33) 5-1239
Jordan	Abu-haitam	Amman	(962-6) 65-3128	Cyprus	Vassos Eliades Ltd.	Nicosia	(357-2) 44-4924	Brazil	Comercial Electronica Unitrotec Ltda.	Sao Paulo	(55-11) 223-1899
Korea	Samsung Electronics Service Center	Seoul	(82-2) 278-3366	Denmark	N.S.I. Electronics A/S	Viby	(45-8) 628-5000	Canada	Samsung Electronics Canada Inc.	Toronto	(1-416) 470-2750
Kuwait	Al Andalus Service Center	Shuwaikh	(965) 471-6612	Finland	Ulkokaupat OY	Espoo	(358-0) 42-0455	Chile	Radio Center	Santiago	(56-2) 39-7810
Lebanon	Tawil and Co.	Beirut	(961-1) 38-0363	France	Hifi Video Service	Puteaux	(33-147) 76-4200	Colombia	Constelacion Ltda.	Bogota	(57) 290-3602
Malaysia	Audio Video (M) Sdn Bhd	Jaya	(60-3) 757-0233	Germany	Samsung Electronics GmbH	Stenbach TS	(49-6171) 70-8200	Costa Rica	Ali Waked	San Andres	(506) 653-1685
New Zealand	Kemwood Appliances	Auckland	(64-9) 88-1409	Hungary	Samsung Electronics Hungary	Budapest	(36-1) 127-2096	Ecuador	Juan El Jun	Cuenca	(593-7) 80-0111
Oman	M/S Al Marzook and Partners	Salalah	(968) 29-2332	Italy	Diron	Milano	(39-2) 2-3028	Guatemala	Sielca	Guatemala city	(502-2) 31-0161
Pakistan	New Electronics (PVT) Ltd.	Karachi	(92-21) 67-3984	Ivory Coast	Imesco	D'hoire	(225) 32-6670	Jamaica	Rayton	Kingston	(1-809) 929-6567
Philippines	Samsung Service Center	Manila	(63-2) 828-4469	Kenya	Mohindra	Nairobi	(254-2) 2-0561	Mexico	Sur	Mexico city	(52-5) 689-7202
Qatar	Samsung Orient Center	Doha	(974) 42-8098	Netherlands	Fodor Service Centrum BV	Rotterdam	(31-10) 426-6555	Panama	Samsung Electronica Panama S. A.	Panama city	(507) 69-6403
Saudi Arabia	Zagzoog & Matabouli	Jeddah Riyadh	(966-2) 851-2111 (966-1) 851-8196	Nigeria	Kewalam Nigeria Ltd	Lagos	(234-1) 66-2337	Papua New Guinea	BNG Trading Co., Ltd.	Moresby	(675) 21-2933
Singapore	Prosperie Ltd. (S)	Muthuraman	(65) 235-1333	Norway	Frigo Norsk A.S	Drammen	(47-3) 81-9670	Peru	Centro de Servicio S. A.	Lima	(51-14) 46-4488
Sri Lanka	Singhagiri Ltd.	Colombo	(94-1) 43-8876	Poland	Webtinx	Warsaw	(48-22) 28-6536	U.S.A.	Samsung Electronics America Inc.	New Jersey Los Angeles	(1-201) 681-6201 (1-213) 537-6791
Taiwan	北東 聯 益 站	台北市	(886-2) 771-7775	Portugal	Samsung Electronica Portuguesa Sati.	Estoril	(351-1) 244-2304	Uruguay	Driva S. A.	Montevideo	(598-2) 92-1340
				South Africa	Tedetex	Johannesburg	(27-11) 683-2803	Venezuela	Prosonido C. A.	Caracas	(58-2) 541-2824

MTTS 2





SCHALTBILD
UNIVERSUM
MODEL NAME : 027.671 7
CHASSIS NAME : P-88MT
CODE NO : 38104-183-550



CAPACITOR	
TYPE	MARK
Ceramic	No Mark
Polyester	P
Tantalum	T
Metal Polyester	MP
Polypropylene	P.P
Polyester Polypro	DSR
Chemical Electrolytic	—
Chemical Non-Polar	—

RESISTOR	
TYPE	MARK
Carbon Composition	C
Oxide Metal Film	M
Metal Film	RM
Carbon	R-C
Variable Resistor	—
Positive Resistor	—

SAFETY PRECAUTION

WARNING : The service should not be attempted by anyone unfamiliar with the necessary precautions on this receiver. The following are the necessary precautions to be observed before servicing.

Since the chassis of this receiver is directly connected to the AC power line - (Hot chassis), an isolation transformer should be used during any dynamic service to avoid the possible shock hazards.

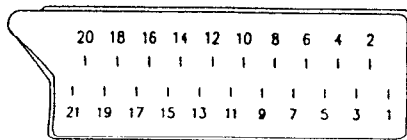
1. Always discharge the picture tube anode to the CRT conductive coating before handling the picture tube. The picture tube is highly evacuated and if broken, glass fragments will be violently expelled. Use the shatterproof goggles and keep the picture tube away from the bare body while handling.
2. When replacing a chassis in the cabinet, always be certain that all the protective devices are put back in place, such as : non-metallic control knobs, insulating covers, shields, isolation resistor-capacitor network etc.

3. Before returning the set to the customer, always pre-check the AC leakage current on the exposed metallic parts of the cabinet, such as antennas, terminals, screwheads, metal overlays, control shafts and etc. To be sure the set is safe to operate without danger of electrical shock. Plug the AC line cord directly into a AC outlet (do not use a line isolation transformer during this check). Use an AC voltmeter having 5000 ohm per volt or more sensitivity in the following manner. Connect a 1500 ohm 10 watt resistor, paralleled by a 0.15uF, AC type capacitor, between a good earth ground (water pipe, conduit etc.) and the exposed metallic parts, one at a time. Measure the AC voltage across the combination of 1500 ohm resistor and 0.15uF capacitor. Reverse the AC plug at the AC outlet and repeat. The AC voltage measurements for each exposed metallic part. The voltage measured must not exceed 0.3 volts RMS. This corresponds to 0.2 milliamp AC. Any value exceeding this limit constitutes a potential shock hazard and must be corrected immediately.

PIN CONNECTION OF EURO-AV SOCKET

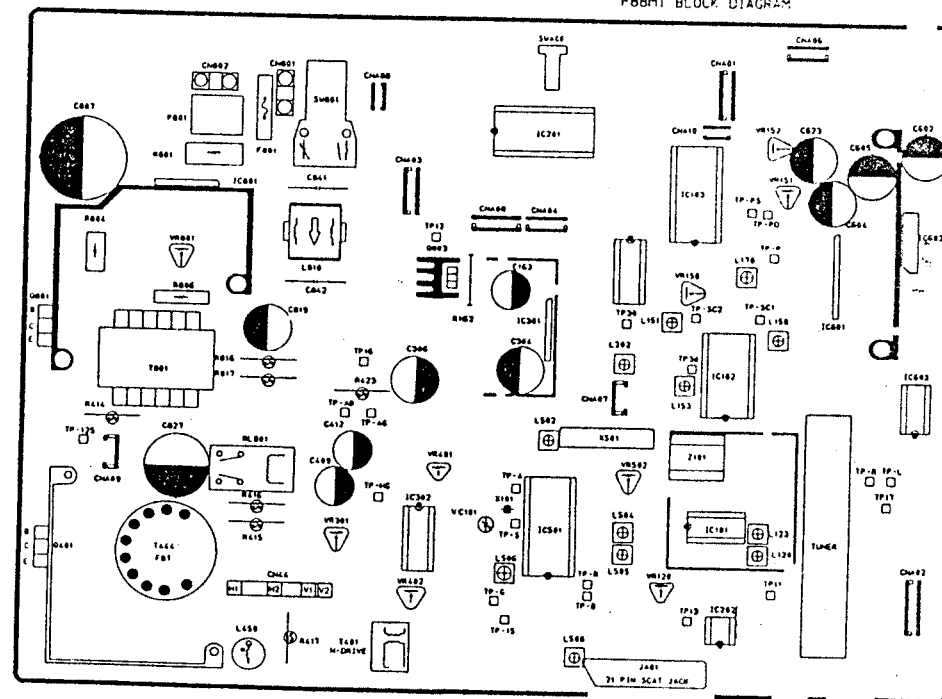
If you wish to connect peripheral equipment to your TV set, your dealer will be able to make the standard correct using the table below.

PIN	CONNECTION	PIN	CONNECTION
1	Audio output R	12	---
2	Audio input R	13	Red earth
3	Audio output L	14	---
4	Audio earth	15	Red input
5	Blue earth	16	Status RGB (fast blanking)
6	Audio input L	17	CVBS earth
7	Blue input	18	RGB status earth
8	Status CVBS	19	CVBS output
9	Green earth	20	CVBS input
10	---	21	Socket earth
11	Green input		



PART LOCATION DIAGRAM

P88MT BLOCK DIAGRAM



INSTALLATION AND SERVICE ADJUSTMENTS

1. GENERAL INFORMATION

All the adjustments are thoroughly checked and corrected when the receiver leaves the factory. Therefore the receiver should operate normally and produce proper colour and B/W picture upon installation. However the minor service adjustments may be required depending on the particular location in which the receiver is operated. This receiver is shipped completely in cardboard carton. Carefully draw out the carton and remove all the packing materials.

Plug the power cord into a convenient two pin power outlet. Turn the receiver ON and adjust the fine tuning for the best picture detail.

Check and adjust all the customer controls such as BRIGHTNESS, CONTRAST and COLOUR Controls to obtain natural colour or B/W picture.

2. AUTOMATIC DEGAUSSING

A degaussing coil is mounted around the picture tube so that the external degaussing after moving the receiver is normally unnecessary, providing the receiver is properly degaussed upon installation. The degaussing coil operates for about 1 second after the power to the receiver is switched ON. If the set is moved or faced in a different direction, the power switch must be switched off at least 10 minutes in order that the automatic degaussing circuit operates properly.

If the chassis or parts of the cabinet becomes magnetized and cause poor colour purity, use an external degaussing coil. Slowly move the degaussing coil around the face-plate of the picture tube, the sides and the rear of the receiver and slowly withdraw the coil to the distance of about 2m before disconnecting it from the AC source. If the colour shading still persists, perform the COLOUR PURITY ADJUSTMENT and CONVERGENCE ADJUSTMENTS procedures, as mentioned later.

3. HIGH VOLTAGE CHECK.

CAUTION : There is no HIGH VOLTAGE ADJUSTMENT on this chassis. But B+ power must be adjusted in +125V under the full colour bar pattern and normal picture control level.

- 1) Connect an accurate high voltage meter to the second anode of the picture tube.
- 2) Turn on the receiver. Set the BRIGHTNESS and CONTRAST control to minimum (zero beam).
- 3) The high voltage should be measured less than 28.5KV.
- 4) Rotate the BRIGHTNESS and CONTRAST control to the both extremes to be sure the high voltage does not exceed the limit of 28.5KV under any conditions.

4. HORIZONTAL OSCILLATOR ADJUSTMENT

If there is an indication of unstable horizontal sync, adjust the HORIZONTAL HOLD control (VR401) to remove the condition. When you adjust the Horizontal Hold control, you should connect TP4G and TPG1 for the H-oscillator adjustment.

5. HORIZONTAL PHASE ADJUSTMENT

If you want to move the center of picture, adjust HORIZONTAL phase control (VR402).

6. VERTICAL HEIGHT ADJUSTMENT

The SIZE control (VR301) on the main board changes the size of the picture, having an equal effect on the top and the bottom.

7. SCREEN ADJUSTMENT

- 1) Tune in an active channel.
- 2) Make the picture normal condition (no blooming or no-flyback line) with the VR screen.

8. FOCUS ADJUSTMENT

Adjust the FOCUS control on FBI for well defined scanning lines in the centre area of the screen.

9. R-F AGC ADJUSTMENT

- 1) Tune the set in the strongest station in your area.
- 2) Turn the AGC control (VR120) on the IF board to fully clockwise position.
- 3) Adjust the AGC control until noises (snow) disappear from the screen.

10. APC ADJUSTMENT

- 1) Receive the colour bar pattern.
- 2) Connect TP-A to TP-G with jumper.
- 3) Control the Trimmer VC101 in the main PCB to get the colour.

11. COLOUR PURITY ADJUSTMENT

NOTE : Before attempting any purity adjustments, the receiver should be operated for at least fifteen minutes. Purity adjustment requires Rubber Wedge kit.

- 1) Demagnetize the picture tube and cabinet using a degaussing coil.
- 2) Turn the CONTRAST and BRIGHTNESS controls to maximum.
- 3) Receive the green colour pattern.
- 4) Loosen the clamp screw holding the yoke, and slide the yoke backward or forward to provide vertical green belt (zone) in the picture screen.
- 5) Remove the Rubber Wedges.
- 6) Rotate and spread the tabs of the purity magnet (See Fig.3) around the neck of the picture tube until a green belt is obtained in the centre of the screen.

And at the same time, centre the raster vertically by adjusting the magnet.

- 7) Move the yoke slowly forward or backward until a uniform red screen is obtained. Tighten the clamp screw.
- 8) Check the purity of the red and blue raster.
- 9) Tighten the clamp screw of the yoke temporarily.
- 10) Obtain a white raster; referring to the "CRT WHITE BALANCE ADJUSTMENT".
- 11) Proceed with convergence adjustment.

12. CRT WHITE BALANCE ADJUSTMENT

- 1) Tune in an active channel.
- 2) Set the colour control to minimum.
- 3) By rotations the RED and blue drive controls (VR550, VR551) clockwise from minimum. Set them to the mid-position.
- 4) Adjust the blue and RED drive control (VR550, VR551) to obtain proper white-balanced picture a high area.

13. CONVERGENCE ADJUSTMENTS

NOTE : Before attempting any convergence adjustment, the receiver should be operated for at least fifteen minutes.

Centre Convergence Adjustment

- 1) Receive the crosshatch pattern with a colour bar signal generator.
- 2) Adjust the BRIGHTNESS and CONTRAST Controls for a well defined pattern.
- 3) Adjust the two tabs of the 4-pole Magnets to change the angle between them (See Fig. 2) and superimpose the red and blue vertical lines in the centre area of the picture screen. (See Fig. 2).
- 4) Turn the both tabs while at the same time keeping angle constant and superimpose the red and blue horizontal lines at the centre of the screen. (See Fig. 3).
- 5) Adjust the two tabs of 6-pole Magnets to superimpose the red/blue line and green one. Adjusting the angle affects the vertical lines and rotating both magnets affect the horizontal lines.
- 6) Due to the interaction between these adjustments the steps 3,4 and 5 should be repeated until the satisfactory results are obtained.

CIRCUMFERENCE CONVERGENCE ADJUSTMENT

- 1) Loosen the clamping screw of deflection yoke to allow the yoke to tilt.
- 2) Put a wedge as shown in Fig. 1 temporarily. (Do not remove the cover paper on adhesive part of the wedge).
- 3) Tilt front of the deflection yoke up or down to obtain better convergence in circumference. (See Fig. 3) Push the mounted wedge into the space between the picture tube and the yoke to fix the yoke temporarily.
- 4) Put the other wedge into bottom space and remove the cover paper to stick.
- 5) Tilt the front of the yoke right or left to obtain the convergence in circumference. (See Fig. 4)
- 6) Keep the yoke position and put another wedge in either upper space. Remove the cover paper and stick the wedge on picture tube to fix the yoke.
- 7) Detach the temporarily mounted wedge and put it in another upper space. Stick it on picture tube to fix the yoke.
- 8) After fixing three wedges recheck overall convergence. Tighten the screw firmly to fix the yoke and check the yoke is firm.
- 9) Stick 3 adhesive tabs on wedges as shown in Fig. 1.

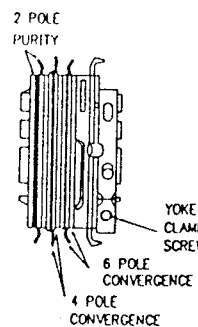
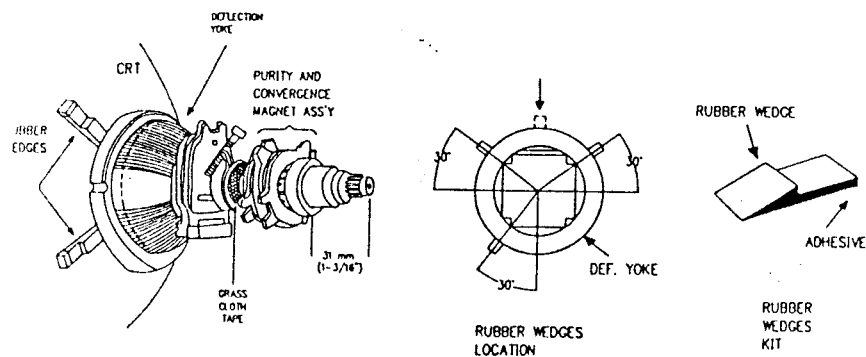
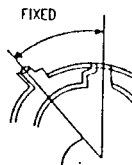
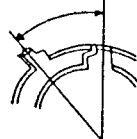


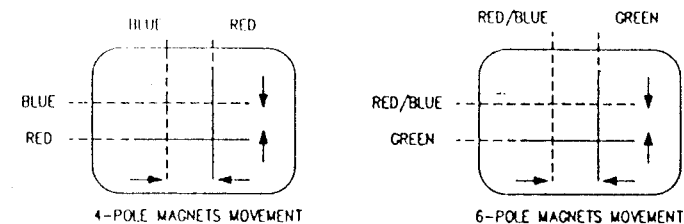
Figure 2 PURITY AND CONVERGENCE MAGNETS

ADJUST THE ANGLE
(VERTICAL LINES)

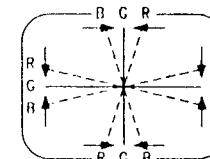


ROTATE TWO TABS
AT THE SAME TIME
(HORIZONTAL LINES)

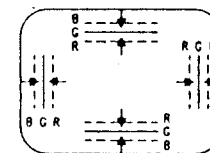
ADJUSTMENT OF MAGNETS



Centre Convergence by Convergence Magnets



INCLINE THE YOKE UP (OR DOWN)



INCLINE THE YOKE RIGHT (OR LEFT)

Circumference Convergence by DEF. Yoke

Figure 3. Dot Movement Pattern.

GENERAL ALIGNMENT INSTRUCTIONS

A. GENERAL

The alignment is an exacting procedure and should be undertaken only when necessary. The test equipments specified or its equivalent is required to properly perform the alignment procedures which are outlined on the following pages. The use of equipment which does not meet these requirements may result in the inability of properly aligning in the receiver. It is essential that the bias values as specified are maintained, while the alignment insures the proper results.

B. EQUIPMENT TERMINATIONS

The alignment pads are designed for correct matching of the equipment to the circuits involved. The failure to the proper matching will result in the responses which cannot be depended upon as representing the true operation of the receiver. The pads should be constructed as compactly as possible with all the unshielded leads not being in excess of 2.5cm long.

C. SIGNAL OVERLOAD

Since the large excessive of the sweep generator causes the overloading of receiver circuits, first, the output of the sweep generator set to zero and then gradually increase

the output until a response is obtained. Further increase of the sweep output should not change the configuration of the response except in amplitude. If the response changes in configuration, for example, flattening at the top or dropping below the base line at the bottom, decrease the sweep output to restore the proper configuration. The oscilloscope gain should be as high as possible to maintain a useable pattern with the peak-to-peak values specified, thus requiring a lower output from the sweep generator and less chance of overload.

The insertion of markers from the marker generator should not cause the distortion of the response.

D. TEST EQUIPMENTS

- 1) PAL/SECAM PATTERN GENERATOR (PW5518)
- 2) OSCILLOSCOPE.
- 3) DC power supply (DC range : 0-10V, 0-20V)
- 4) Matching pad.
- 5) Probe (which impedance is 75 ohm)
- 6) TV MULTI SOUND GENERATOR
- 7) BNC TO DIN JACK
- 8) BNC TO BNC CABLE
- 9) DIGITAL VOLT METER

1. VIDEO DETECTOR ALIGNMENT

1.1 Setting

- 1.1.1 PM5518 : Crosshatch pattern of 38.9MHz.
- 1.1.2 DC power supply : 12V
- 1.1.3 Oscilloscope : 50mV/DIV, 0.5uSEC/DIV, 10:1 probe.

1.2 Preparation

- 1.2.1 Connect the DC power supply probe to TP-12 of main pcb.
- 1.2.2 Connect the RF out of the PM5518 with the direct probe to the IF pin of the TUNER.
- 1.2.3 Connect the 10:1 probe of oscilloscope to TP11

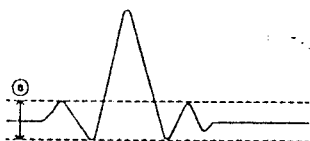


Figure 4 2T PULSE

1.3 STEPS

- 1.3.1 Adjust the VIDEO DET. coil (L123) to equalize the ② level.

2. AFT ADJUSTMENT

2.1 Setting

- 2.1.1 PM5518 : Multiburst pattern of 38.9MHz
- 2.1.2 DC power supply : 12V
- 2.1.3 Digital voltmeter : 10V range

2.2 Preparation

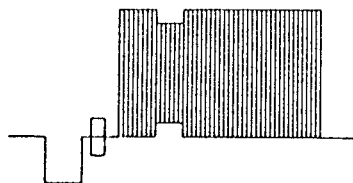
- 2.2.1 Connect the DC power supply probe to TP-12 of the main pcb.
- 2.2.2 Connect the digital voltmeter probe to TP-17 of the main pcb.
- 2.2.3 Connect the RF out of the PM5518 with the direct probe to the IF pin of the tuner.

2.3 STEPS

- 2.3.1 Adjust the L124 until the digital voltmeter is to be 6V.

3. GROUP DELAY ALIGNMENT

- 1) Receive the crosshatch pattern of 217.25MHz with the PAL pattern generator.
- 2) Set the signal gain of the pattern generator to be maximum (about 75 - 85dBuV).
- 3) Connect the oscilloscope probe (using 10:1 probe) to TP-11.
- 4) Adjust the upper core of tuner so that the amplitude of multi-burst signal is flat. (See Fig.)



4. APC ADJUSTMENT

- 1) Receive the colour bar pattern with PAL colour bar generator.
 - 2) Connect the terminal TPA to the terminal TPG with the short jumper wire.
 - 3) Adjust the APC control (VC101) so that the colour bar pattern stands still vertically or drifts slowly across the picture screen (See Figure 5).
 - 4) Remove the short jumper wire.
 - 5) Check that the colour appears with in 0.5sec when changing the channel to another.
- If the colour appears slowly or the colour sync is not normal, retouch the colour sync Trimmer (VC101) for the proper colour display.

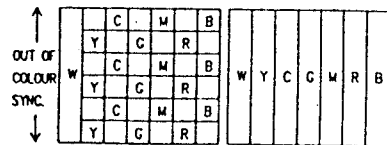


Figure 5

5. COLOUR MATRIX ADJUSTMENT

- 1) Receive colour bar pattern with colour bar pattern generator (Figure 6-1)
- 2) Set the Contrast, Brightness, Colour controls to the normal position
- 3) Connect the oscilloscope probe to TP-B.
- 4) Adjust VR502 so that the part ⑥ and part ⑦ (Blanking level) are on the same level. (See Figure 6-2)
- 5) Adjust L502 (DL matching coil) so that part ⑥ and part ⑦ (Blanking level) are on the same level.
- 6) If the venetian blind effect appear after this adjustment repeat the above step 4, and 5.

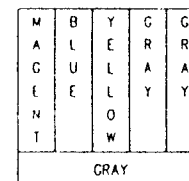


Figure 6-1

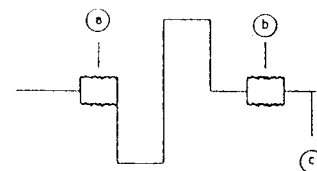


Figure 6-2

6. CHROMA TRAP ADJUSTMENT

- 1) Receive Red pattern of the PAL pattern generator.
- 2) Connect the oscilloscope to TP-30.
- 3) Adjust L207 until the amplitude A of the Red signal is minimum (See Fig. 7).

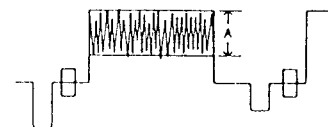


Figure 7

7. SECAM IDENTIFICATION ADJUSTMENT

- 1) Receive the SECAM colour signal with SECAM pattern generator.
- 2) Connect the oscilloscope probe (high impedance, 100:1) to the TP-S.
- 3) Adjust L506 to obtain the maximum D.C. voltage.

8. R-Y, B-Y DEMODULATION ADJUSTMENT

- 1) Receive the SECAM colour bar signals.
- 2) Connect the oscilloscope probe to terminal TP-R.
- 3) Adjust L504 such that the level of the black and white are in accordance with the blanking level (See Fig. 8-1)
- 4) Then change the oscilloscope probe to terminal TP-B.
- 5) Adjust L505 such that the level of the black and white are in accordance with the blanking level (See Fig. 8-2)

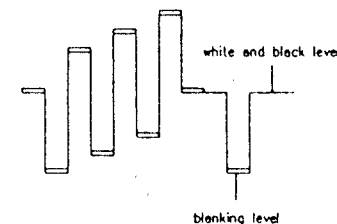


Figure 8-1

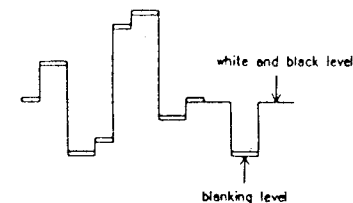


Figure 8-2

9. BELL FILTER ADJUSTMENT

- 1) Receive the SECAM colour bar signals.
- 2) Connect the oscilloscope probe to the terminal TP-15.
- 3) Adjust L508 for the flat level of amplitude in each colour bar waveform on the scope (See Fig. 9)

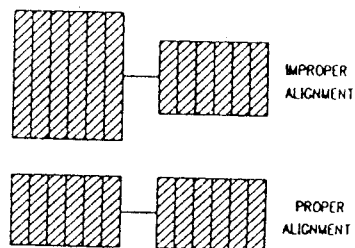


Figure 9

MULTI SOUND ADJUSTMENT

- 1) Connect the Video out on PAL PATTERN GENERATOR to the Video on the TV-Multi-SOUND GENERATOR with BNC to BNC cable.
- 2) Connect the RF output on the TV Multi-SOUND GENERATOR to the antenna input on the TV set with BNC to DIN jack.
- 3) Since only R sound signal with pilot carrier should be transmitted, select not (R+L)/2, L or DUAL, but R with pilot carrier signal and set the stereo mode.

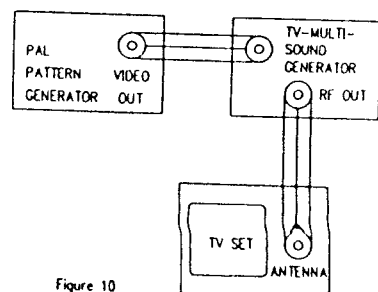


Figure 10

1. SIF DETECTOR ADJUSTMENT

- 1) Receive the colour bar signal and STEREO SOUND by Fig. 10.
- 2) Connect the oscilloscope probe to the terminal TP-38
- 3) Adjust L153 until the amplitude A of the colour bar signal is minimum (See Fig. 11)

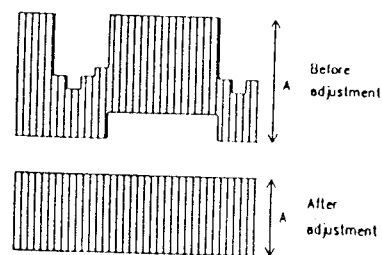


Figure 11

2. SC1, SC2 DETECTOR ADJUSTMENT

- 1) Receive the colour bar signal and stereo sound.
- 2) Connect the oscilloscope probe to the terminal TP-SC1.
- 3) Adjust L150 until the amplitude A is maximum.
- 4) And, connect the oscilloscope probe to the terminal TP-SC2.
- 5) Adjust L151 until the amplitude A is maximum (See Fig. 13).

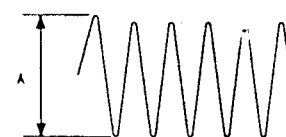


Figure 13

3. PILOT DETECTOR ADJUSTMENT

- 1) Receive the colour bar signal and stereo sound.
- 2) Connect the oscilloscope probe to the terminal TP-P.
- 3) Adjust L170 until the amplitude A of pilot waveform is proper (See Fig. 14).

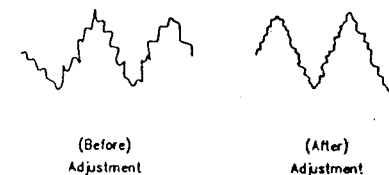


Figure 14

4. STEREO IDENT ADJUSTMENT

- 1) Receive the colour bar signal and stereo sound.
- 2) Connect the oscilloscope probe to the terminal TP-PS.
- 3) Adjust VR151 until the amplitude A of Fig. 15 is maximum.

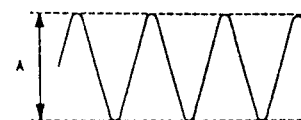


Figure 15

5. DUAL IDENT ADJUSTMENT

- 1) Receive the colour bar signal and dual sound.
- 2) Connect the oscilloscope probe to the terminal TP-PD.
- 3) Adjust VR152 until the amplitude A of Fig. 16 is maximum.



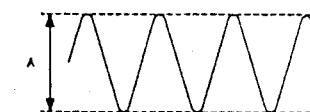
Figure 16

6. SOUND SEPERATION ADJUSTMENT

- 1) Receive the colour bar signal and stereo sound.
- 2) Push the Auto Stereo switch (SWA07).
- 3) Connect the oscilloscope probe to the terminal TP-L.
- 4) And, Connect the oscilloscope probe to the terminal TP-R.
- 5) Adjust VR150 to be no distortion of R,L signal (See Fig. 17).



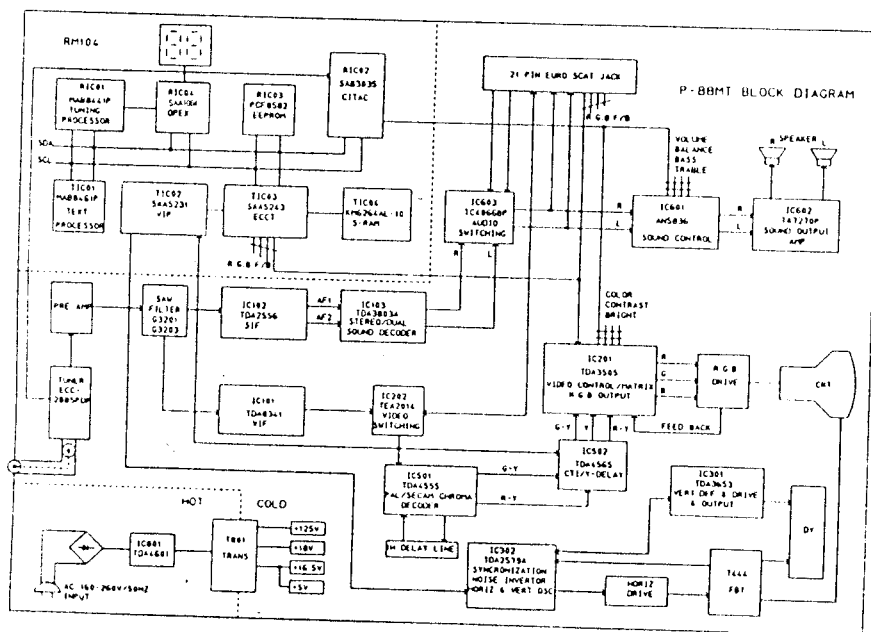
Before Adjustment



After Adjustment

Figure 17

CHASSIS BLOCK DIAGRAM



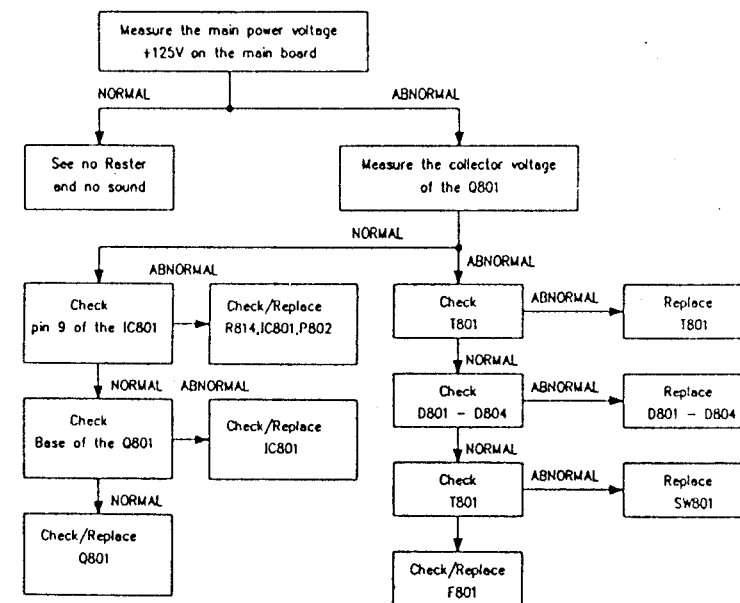
TROUBLESHOOTING CHARTS

The following charts are devoted to troubleshooting which, if followed carefully, will assist you in tracking down a fault to the correct stage.

In order to utilize the charts (fault trees), first establish the complaint, e.g.-NO Raster, NO Sound.

Locate the chart applicable and then progress through the various alternatives until a final block indicates the defective components or stage.

NO POWER



3-1. TUNING PROCESSOR MAB 8441P W203

PIN	NAME	FUNCTION	PIN	NAME	FUNCTION
1	P22	OLEN line for the opex	15	XTAL1	4MHz oscillator
2	SDA	IIC bus data line	16	XTAL2	4MHz oscillator
3	SCL	IIC bus clock line	17	RESET	Power on reset input
4	P00	Keyboard scan line A	18	P10	Power switch on/off
5	P01	Keyboard scan line B	19	P11	
6	P02	Keyboard scan line C	20	P12	Tuning mode select
7	P03	Keyboard scan line D	21	P13	
8	P04	Keyboard scan line E	22	P14	
9	P05	Keyboard scan line F	23	P15	VCR switch output
10	P06	Keyboard scan line G	24	P16	List option select
11	P07	Keyboard scan line H	25	P17	Message received/standby LED output
12	INT/T0	Input from infra red pre amp	26	P20	
13	T1		27	P21	
14	VSS	Ground	28	VCC	Standby supply

3-2. TEXT PROCESSOR MAB 8461P W115

PIN	NAME	FUNCTION	PIN	NAME	FUNCTION
1	P22	Not used	15	XTAL1	6MHz oscillator
2	SDA	IIC data line	16	XTAL2	6MHz oscillator
3	SCL	IIC clock line	17	RESET	Power on reset
4	P00		18	P10	FLOF/LIST mode selected at power on
5	P01		19	P11	English/european symbols
6	P02		20	P12	
7	P03	Pon-output	21	P13	
8	P04		22	P14	
9	P05		23	P15	
10	P06		24	P16	
11	P07		25	P17	
12	INT/T0		26	P20	Select 128/256 byte NVRAM
13	T1	PL signal input	27	P21	
14	VSS	Ground	28	VCC	Supply

3-3. CITAC SAB3035 (COMPUTER INTERFACE FOR TUNING AND CONTROL)

The SAB3035 provides closed-loop digital tuning of TV receivers, with or without AFC, as required. It also controls up to 8 analogue functions, 4 general purpose I/O ports and 4 high-current outputs for tuner band selection.

PIN	NAME	FUNCTION	PIN	NAME	FUNCTION
1	DAC4	Outputs of statics DAC	15	TUN	Tuning voltage amplifier output
2	DAC5	Outputs of statics DAC	16	VP1	+12V supply voltage
3	DAC6	Outputs of statics DAC	17	VP3	32V supply for tuning voltage amplifier
4	DAC7	Outputs of statics DAC	18	P10	High-current band selection output ports
5	SDA	Serial data line (IIC bus)	19	P11	High-current band selection output ports
6	SCL	Serial clock line (IIC bus)	20	P12	High-current band selection output ports
7	P20	General purpose in/output port	21	P13	High-current band selection output ports
8	P21	General purpose in/output port	22	VP2	Positive supply for high current band selection output circuits
9	P22	General purpose in/output port	23	FIOV	Input from prescaler
10	P23	General purpose in/output port	24	OSC	Crystal oscillator input
11	AFC+	AFC Input	25	DAC0	Output of static DAC
12	AFC-	AFC Input	26	DAC1	Output of static DAC
13	T1	Tuning voltage amplifier inverting	27	DAC2	Output of static DAC
14	GND	Ground	28	DAC3	Output of static DAC

3-4. VIP SAA5231 (TELETEXT VIDEO PROCESSOR)

PIN	FUNCTION	PIN	FUNCTION
1	Sync output	15	Data output (TTD)
2	Video input level select	16	Supply
3	HF filter	17	6MHz output
4	Store HF	18	Oscillator output
5	Store amplitude	19	Filter 2
6	Store zero level	20	Oscillator input
7	External data input	21	Filter 1
8	Data timing	22	Sandcastle input pulse (PL/CBB)
9	Store phase	23	Pulse timing resistor
10	VCR	24	Pulse timing capacitor
11	Crystal	25	Video composite sync output (VCS)
12	Clock filter	26	Black level
13	Ground	27	Composite video input
14	Clock output (TTC)	28	Text composite sync input (TCS) or Scan composite sync input (SCS)

3-5. ECCT SAA5243 (ENHANCED COMPUTER CONTROLLED TELETEXT CIRCUIT)

The SAA5243 is a MOS N-channel integrated circuit which performs all the digital logic functions of a 625-line World System Teletext decoder. It operates in conjunction with the teletext video processor SAA5231, standard static RAMs and is controlled via the 2-wire 1 C bus. The device can be used to provide videotex display conforming to a serial character attribute protocol.

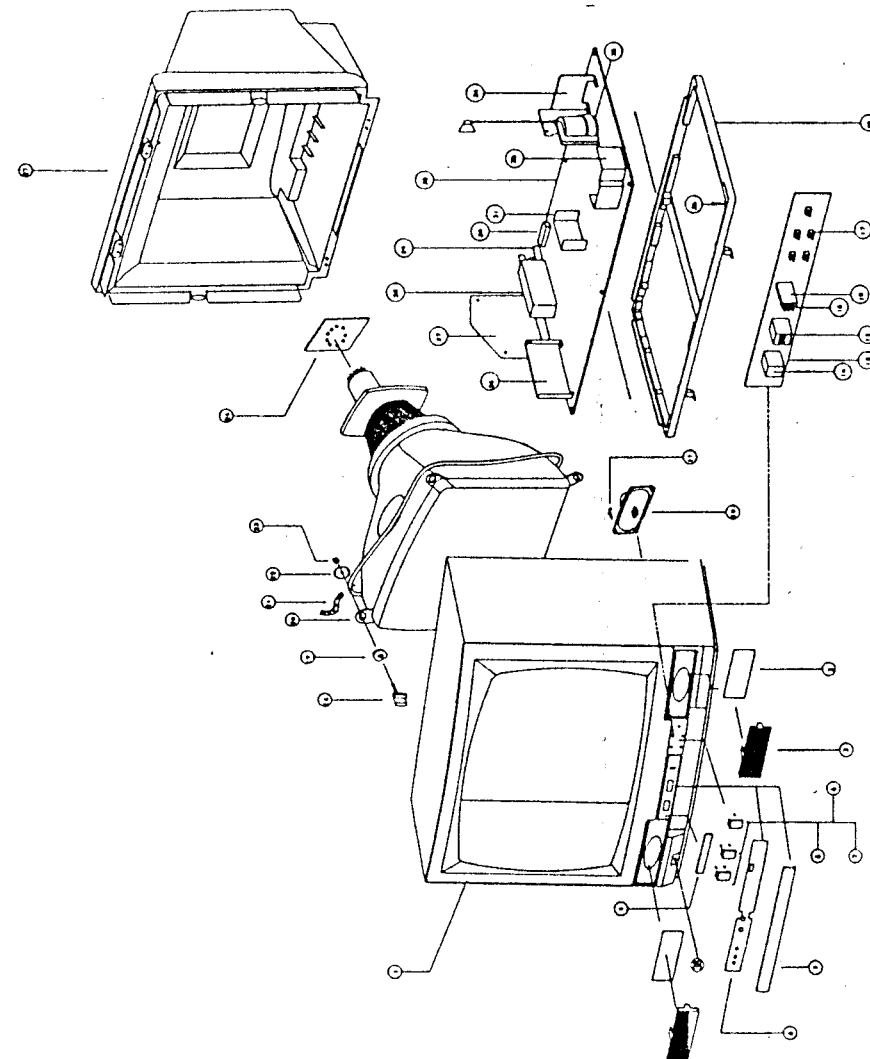
PIN	NAME	FUNCTION	PIN	NAME	FUNCTION
1	VDD	Power supply	12	TCS/SCS	Text composite sync
2,3,40	A10,A11,A12	Chopier address			/scan composite sync
4	OE	Output enable	13,14,15	R.G.B	Red,Green,Blue
5	WE	Write enable	16	COR	Contrast reduction
6	TTD	Teletext data	17	BLN	Blinking
7	TTCl	Teletext clock	18	Y	Character foreground
8	OOD/EVEN	OOD/EVEN	19	SCL	Serial clock
9	f6	Character display clock	20	SDA	Serial data
10	VCS	Video composite sync	21	VSS	Ground
11	SAND	Sandcastle	22 - 29	D0-D7	8 RAM data lines
			30 - 39	A0-A9	RAM address

3-7. OPEX SAA10 64 (OUTPUT PORT EXPANDER)

The PCF8582 is a 2K-bit 5V electrically eraseable programmable read only memory (EEPROM) organized as 256 by 8 bits. It is designed in a floating gate CMOS technology. As data bytes are received and transmitted via the serial I²C bus, an eight pin DIL package is sufficient. Up to eight PCF8582 devices may be connected to the I²C bus. Chip select is accomplished by three address inputs.

PIN	NAME	FUNCTION	PIN	NAME	FUNCTION
1	A0	Address input or test mode select	15	SDA	Serial data (I ² C bus line)
2	A1	Address input or test mode select	16	SCL	Serial clock (I ² C bus line)
3	A2	Address input or test mode select	17	RC	Input for timer constant
4	VSS	Ground	18	VDD	Supply

EXPLODED-VIEW



PARTS LIST

NO	CODE NO	DESCRIPTION	SPECIFICATION	QTY
1	36001-415-060	CABINET-FRONT	HIPS HB BLK	1
2	36844-113-240	CUSHION-FELT,SP	FELT T0.1 BLK 148X42	2
3	37713-192-520	GRILLE-WOOFER	SPC-1 T0.5	2
4	37654-133-411	WINDOW-F/S	PC-SHEET VO T0.5	1
5	37624-169-330	KNOB-POWER	ABS HB BLK #701	1
6	37624-619-650	KNOB-CHANNEL	ABS HB BLK #701	1
7	37624-169-460	KNOB-VOLUME	ABS HB BLK #701	1
8	37802-106-020	PVC-CONTROL	PVC-SHEET T0.3	1
9	37642-123-490	DOOR-CONTROL	HIPS HB BLK #701	1
10	34209-189-190	SPEAKER-GENERAL	5902CR 3W	2
11	37148-530-121	SCREW-TAP,RH	2S-3X12 FE FZY	8
12	33004-145-071	PWB-CONTROL (S.N.A)	207X55X1.6T	1
13	36044-102-610	GUIDE-LED	ABS HB BLK (18KEY)	1
14	32199-101-020	MODULE-REMOCON	SC-05(M)	1
15	36044-101-810	GUIDE-LED	ABS VO BLK	1
16	32309-110-430	LED	DS2(DL-25R)/SL-425R	2
17	33529-140-710	SWITCH-TACT	EVO-PAC09K/SKHAE043B	5
18	36614-212-730	BRKT-CRT	SBHG-1 100 EGI T1.6	4
19	36834-110-120	WASHER-GUM,CRT	NATURAL RUBBER BLK T4.5	4
20	32019-255-103	CRT-COLOR	54GGB98X	1
21	36634-111-720	CLAMPER	PVC VO BLK T0.7 140MM	2
22	37334-105-530	WASHER-SPRING	SBHG-1 100 T1.6	4
23	37208-115-001	NUT-HEX	1-M5 FE FZY	4
24	33004-141-651	PWB-CRT (S.N.A)	245X245X1.6T-6Y	1
25	36601-231-810	HOLDER-PCB	ABS VO GRV	1
26	35684-117-211	HEAT-SINK,AUDIO	A1050S-H14 T2.0	1
27	33004-143-841	PWB-REMOCON (S.N.A)	164.5X169X1.6T	1
28	34519-990-090	TUNER	ECC-2885PD(P)	1
29	33334-105-040	PIN-JACK(RED)	8MM	1
	33334-105-050	PIN-JACK(YELLOW)	8MM	1
	33334-105-060	PIN-JACK(WHITE)	8MM	1
30	33134-103-030	RECEPTACLE-PERI	HXC-1510-01-300A	1
31	35684-116-510	HEAT-SINK,REG	SPC-1 T1.0	1
32	33004-154-961	PWB-MAIN (S.N.A)	330X245X1.6T	1
33	35683-116-011	HEAT-SINK,POWER	A1050S-H14 T2.0	1
34	35683-115-421	HEAT-SINK,MAIN	A1050S-H14 T2.0	1
35	32859-154-057	TRANS-FLYBACK	FCM-2012L02	1
36	37154-101-210	SCREW-WASHER,SPEC	2S-3X10 FE FZY	2
37	36001-481-010	CABINET-BACK	HIPS VO BLK	1
38	33359-521-060	JACK-HEADPHONE	SCJ-0638-C	1

CHASSIS REPLACEMENT PARTS LIST

ABBREVIATIONS: CC C-CERAMIC
 CE C-ELECTROLYTIC
 CFS C-M,POLYESTER
 CK C-CERAMIC,HK
 CQ C-POLYPROPYLENE,POLYESTER
 CS C-TANTALUM,SOLID

RC R-COMPOSITION
 RD R-CARBON
 RF R-FUSIBLE
 RM R-METAL,FILM
 RP R-CEMENT WIRE
 RS R-METAL,OXIDE

NOTE: The items with "*" are usually out of stock since they are seldom required for the routine service. There may be some anticipated delay when you order these items.

*** S.N.A.=Service Not Available.***

Loc No	Supplier Part No.	Description	Loc No	Supplier Part No.	Description
1. PWB - MAIN			R171	31018-177-563	RD 1/8T 56K-J
			R173	31018-177-104	RD 1/8T 100K-J
			R174	31018-177-104	RD 1/8T 100K-J
			R177	31047-256-193	RM 1/4T 619K-F
			R178	31047-256-193	RM 1/4T 619K-F
			R179	31018-277-103	RD 1/4T 10K-J
			R180	31018-177-752	RD 1/8T 7.5K-J
			R181	31018-177-202	RD 1/8T 2K-J
			R182	31018-177-752	RD 1/8T 7.5K-J
			R183	31018-177-102	RD 1/8T 1K-J
			R185	31018-177-103	RD 1/8T 10K-J
			R197	31046-467-111	RS 1T 110-J(AUTO)
			R198	31018-277-103	RD 1/4T 10K-J
			R201	31018-277-102	RD 1/4T 1K-J
			R202	31018-177-102	RD 1/8T 1K-J
			R203	31018-277-750	RD 1/4T 75-J
			R204	31018-277-750	RD 1/4T 75-J
			R205	31018-277-750	RD 1/4T 75-J
			R206	31018-277-750	RD 1/4T 75-J
			R213	31018-277-101	RD 1/4T 100-J
			R214	31018-277-101	RD 1/4T 100-J
			R215	31018-277-101	RD 1/4T 100-J
			R220	31018-277-622	RD 1/4T 6.2K-J
			R221	31018-277-301	RD 1/4T 300-J
			R222	31018-177-151	RD 1/8T 150-J
			R223	31018-177-272	RD 1/8T 2.7K-J
			R224	31018-177-101	RD 1/8T 100-J
			R231	31018-277-223	RD 1/4T 22K-J
			R232	31018-177-103	RD 1/8T 10K-J
			R233	31018-177-823	RD 1/8T 82K-J
			R234	31018-177-334	RD 1/8T 330K-J
			R235	31018-177-684	RD 1/8T 680K-J
			R236	31018-177-683	RD 1/8T 68K-J
			R237	31018-177-332	RD 1/8T 3.3K-J
			R238	31018-277-472	RD 1/4T 4.7K-J
RESISTORS					
R101	31018-177-562	RD 1/8T 5.6K-J			
R102	31018-177-102	RD 1/8T 1K-J			
R103	31018-177-270	RD 1/8T 27-J			
R104	31018-177-102	RD 1/8T 1K-J			
R106	31018-277-101	RD 1/4T 100-J			
R107	31018-177-221	RD 1/8T 220-J			
R120	31018-277-331	RD 1/4T 330-J			
R121	31018-177-824	RD 1/8T 820K-J			
R122	31018-177-823	RD 1/8T 82K-J			
R123	31018-177-331	RD 1/8T 330-J			
R124	31018-177-151	RD 1/8T 150-J			
R125	31018-277-271	RD 1/4T 270-J			
R126	31018-177-104	RD 1/8T 100K-J			
R127	31018-177-393	RD 1/8T 39K-J			
R128	31018-277-432	RD 1/4T 4.3K-J			
R129	31018-277-273	RD 1/4T 27K-J			
R130	31018-277-243	RD 1/4T 24K-J			
R141	31018-277-101	RD 1/4T 100-J			
R142	31018-277-101	RD 1/4T 100-J			
R150	31018-177-681	RD 1/8T 680-J			
R151	31018-177-561	RD 1/8T 560-J			
R154	31018-177-122	RD 1/8T 1.2K-J			
R155	31018-177-561	RD 1/8T 560-J			
R156	31018-177-681	RD 1/8T 680-J			
R162	31046-567-220	RS 2T 22-J(AUTO)			
R170	31018-177-562	RD 1/8T 5.6K-J			

Loc No	Supplier Part No.	Description	Loc No	Supplier Part No.	Description
R251	31018-177-104	RD 1/8T 100K-J	R510	31018-177-272	RD 1/8T 2.7K-J
R252	31018-177-103	RD 1/8T 10K-J	R511	31018-177-911	RD 1/8T 910-J
R253	31018-177-103	RD 1/8T 10K-J	R512	31018-177-561	RD 1/8T 560-J
R254	31018-177-103	RD 1/8T 10K-J	R513	31018-177-181	RD 1/8T 180-J
R255	31018-277-910	RD 1/4T 91-J	R514	31018-177-821	RD 1/8T 820-J
R256	31018-177-103	RD 1/8T 10K-J	R515	31018-177-122	RD 1/8T 1.2K-J
R257	31018-277-750	RD 1/4T 75-J	R516	31018-177-272	RD 1/8T 2.7K-J
R301	31018-277-301	RD 1/4T 300-J	R517	31018-177-102	RD 1/8T 1K-J
R302	31018-177-102	RD 1/8T 1K-J	R518	31018-177-681	RD 1/8T 680-J
R303	31018-277-152	RD 1/4T 1.5K-J	R519	31018-177-473	RD 1/8T 47K-J
R304	31018-377-331	RD 1/2T 330-J	R523	31018-177-124	RD 1/8T 120K-J
R305	31018-277-244	RD 1/4T 240K-J	R524	31018-177-472	RD 1/8T 4.7K-J
R308	31018-177-203	RD 1/8T 20K-J	R546	31018-177-122	RD 1/8T 1.2K-J
R309	31018-277-109	RD 1/4T 1-J	R547	31018-277-470	RD 1/4T 47-J
R310	31018-177-822	RD 1/8T 8.2K-J	R548	31018-177-101	RD 1/8T 100-J
R311	31018-277-682	RD 1/4T 6.8K-J	R549	31018-177-101	RD 1/8T 100-J
R312	31018-277-154	RD 1/4T 150K-J	R603	31018-177-103	RD 1/8T 10K-J
R313	31018-177-562	RD 1/8T 5.6K-J	R604	31018-177-103	RD 1/8T 10K-J
R314	31018-277-220	RD 1/4T 22-J	R605	31018-177-102	RD 1/8T 1K-J
R315	31018-177-122	RD 1/8T 1.2K-J	R606	31018-177-472	RD 1/8T 4.7K-J
R316	31018-177-102	RD 1/8T 1K-J	R608	31018-277-102	RD 1/4T 1K-J
R400	31018-277-471	RD 1/4T 470-J	R609	31018-177-472	RD 1/8T 4.7K-J
R401	31018-277-221	RD 1/4T 220-J	R611	31018-277-472	RD 1/4T 4.7K-J
R403	31018-277-271	RD 1/4T 270-J	R612	31018-277-472	RD 1/4T 4.7K-J
R404	31018-277-222	RD 1/4T 2.2K-J	R613	31018-277-472	RD 1/4T 4.7K-J
R405	31018-277-103	RD 1/4T 10K-J	R614	31018-177-562	RD 1/8T 5.6K-J
R406	31018-277-123	RD 1/4T 12K-J	R615	31018-277-220	RD 1/4T 22-J
R407	31018-277-333	RD 1/4T 33K-J	R616	31018-177-562	RD 1/8T 5.6K-J
R408	31018-277-221	RD 1/4T 220-J	R617	31018-277-152	RD 1/4T 1.5K-J
R411	31018-377-103	RD 1/2T 10K-J	R618	31018-177-751	RD 1/8T 750-J
R412	31049-375-154	RM 1/2T 150K-F	R619	31018-177-104	RD 1/8T 100K-J
R414	31059-002-010	RF 1/2P 1-J	R620	31018-177-104	RD 1/8T 100K-J
R415	31059-002-130	RF 1/2P 0.47-K	R621	31018-177-751	RD 1/8T 750-J
R416	31059-002-010	RF 1/2P 1-J	R698	31046-567-479	RS 2T 4.7-J(AUTO)
R417	31058-327-150	RF 1/2P 150-J	R699	31018-277-103	RD 1/4T 10K-J
R418	31046-467-102	RS 1T 1K-J (AUTO)	R801	31039-687-569	RW 7H 5.6-J
R419	31018-377-124	RD 1/2T 120K-J	R802	31046-468-688	RS 1T 0.68-K (AUTO)
R420	31018-277-433	RD 1/4T 43K-J	R803	31018-277-270	RD 1/4T 27-J
R422	31018-277-102	RD 1/4T 1K-J	R804	31039-586-390	RW 5J 39-J
R423	31046-577-390	RS 2T 39-J	R805	31046-567-101	RS 2T 100-J(AUTO)
R424	31018-377-220	RD 1/2T 22-J	R806	31046-467-274	RS 1T 270K-J (AUTO)
R501	31018-177-222	RD 1/8T 2.2K-J	R807	31046-467-274	RS 1T 270K-J (AUTO)
R502	31018-177-471	RD 1/8T 470-J	R808	31018-277-153	RD 1/4T 15K-J
R503	31018-177-333	RD 1/8T 33K-J	R809	31018-277-122	RD 1/4T 1.2K-J
R504	31018-177-512	RD 1/8T 5.1K-J	R810	31018-277-103	RD 1/4T 10K-J
R505	31018-177-103	RD 1/8T 10K-J	R811	31018-277-221	RD 1/4T 220-J
R506	31018-177-153	RD 1/8T 15K-J	R812	31018-277-682	RD 1/4T 6.8K-J
R507	31018-177-153	RD 1/8T 15K-J	R813	31046-567-154	RS 2T 150K-J(AUTO)
R508	31018-177-333	RD 1/8T 33K-J	R814	31049-317-104	RS 3P 2.7K-J

Loc No	Supplier Part No.	Description	Loc No	Supplier Part No.	Description
R815	31028-328-475	RC 1/2P 4.7M-K	C161	31507-127-010	ECQ B1H 473JF3
R816	31059-002-130	RF 1/2P 0.47-K	C162	31407-105-280	CC45 TAPC CH 50V 560-J
R817	31059-002-130	RF 1/2P 0.47-K	C163	31609-401-510	CE04W 16V 1000M VENT SNA
R818	31046-567-123	RS 2T 12K-J(AUTO)	C171	31417-109-100	CK45 TAPC F 50V 102-Z
R819	31048-547-270	RS 2P 27-J	C172	31607-402-200	CE04W TAPC 50V 0.47M
R820	31046-467-680	RS 1T 68-J (AUTO)	C173	31607-402-070	CE04W TAPC 35V 22M
R821	31046-567-333	RS 2T 33K-J(AUTO)	C174	31507-127-010	ECQ B1H 473JF3
RF01	31018-277-104	RD 1/4T 100K-J	C175	31507-127-010	ECQ B1H 473JF3
RF02	31018-277-104	RD 1/4T 100K-J	C176	31507-127-010	ECQ B1H 473JF3
VARIABLE RESISTORS			C177	31507-127-010	ECQ B1H 473JF3
VR120	31249-128-008	EVN-DJA A03 B50K	C178	31607-401-460	CE04W TAPC 16V 47M
VR150	31249-128-004	EVN-DJA A03 B1K	C179	31607-402-200	CE04W TAPC 50V 0.47M
VR151	31249-128-003	EVN-DJA A03 B2K	C180	31607-401-470	CE04W TAPC 16V 100M VENT
VR152	31249-128-011	EVN-DJA A03 B500	C181	31417-109-140	CK45 TAPC F 50V 103-Z
VR301	31249-128-010	EVN-DJA A03 B100K	C182	31507-127-017	ECQ B1H 682JF3
VR401	31249-128-005	EVN-DJA A03 B5K	C183	31507-127-017	ECQ B1H 682JF3
VR402	31249-128-008	EVN-DJA A03 B50K	C184	31607-402-240	CE04W TAPC 50V 4.7M
VR502	31249-128-001	EVN-DJA A03 B10K	C185	31607-402-240	CE04W TAPC 50V 4.7M
VR801	31249-128-005	EVN-DJA A03 B5K	C186	31607-402-200	CE04W TAPC 50V 0.47M
			C191	31607-402-200	CE04W TAPC 50V 0.47M
			C192	31607-401-430	CE04W TAPC 25V 10M
			C193	31607-402-240	CE04W TAPC 50V 4.7M
			C194	31607-401-430	CE04W TAPC 25V 10M
			C196	31607-402-240	CE04W TAPC 50V 4.7M
			C200	31607-402-240	CE04W TAPC 50V 4.7M
			C201	31419-104-400	CK45 B 50V 102-K
C100	31417-109-100	CK45 TAPC F 50V 102-Z	C203	31407-106-380	CC45 TAPC RH 50V 181-J
C101	31417-104-270	CK45 TAPC B 50V 681-K	C204	31607-402-240	CE04W TAPC 50V 4.7M
C103	31417-109-140	CK45 TAPC F 50V 103-Z	C205	31607-402-240	CE04W TAPC 50V 4.7M
C104	31417-109-140	CK45 TAPC F 50V 103-Z	C206	31607-902-250	CE04W TAPC 50V 0.22M
C120	31417-109-140	CK45 TAPC F 50V 103-Z	C207	31607-402-240	CE04W TAPC 50V 4.7M
C121	31417-109-100	CK45 TAPC F 50V 102-Z	C208	31607-402-250	CE04W TAPC 50V 10M
C122	31417-109-140	CK45 TAPC F 50V 103-Z	C209	31519-002-540	CFS922M 100V 0.33-K
C123	31607-402-220	CE04W TAPC 50V 2.2M	C210	31407-101-240	CC45 TAPC SL 50V 330-J
C124	31607-401-490	CE04W TAPC 16V 330M-M(SC)	C211	31519-002-540	CFS922M 100V 0.33-K
C125	31417-109-140	CK45 TAPC F 50V 103-Z	C212	31507-127-008	ECQ B1H 223JF3
C126	31417-109-140	CK45 TAPC F 50V 103-Z	C213	31507-127-008	ECQ B1H 223JF3
C127	31417-109-100	CK45 TAPC F 50V 102-Z	C214	31507-127-008	ECQ B1H 223JF3
C128	31607-402-220	CE04W TAPC 50V 2.2M	C215	31519-002-540	CFS922M 100V 0.33-K
C129	31417-109-140	CK45 TAPC F 50V 103-Z	C216	31507-127-008	ECQ B1H 223JF3
C150	31507-127-016	ECQ B1H 472JF3	C217	31507-127-008	ECQ B1H 223JF3
C151	31607-402-210	CE04W TAPC 50V 1M	C218	31507-127-008	ECQ B1H 223JF3
C152	31507-127-008	ECQ B1H 223JF3	C219	31607-401-490	CE04W TAPC 16V 330M-M(SC)
C153	31507-127-010	ECQ B1H 473JF3	C222	31507-127-017	ECQ B1H 682JF3
C154	31407-105-300	CC45 TAPC CH 50V 680-J	C251	31507-121-260	CQ921M TAPC 100V 0.1U-J
C156	31417-109-140	CK45 TAPC F 50V 103-Z	C252	31507-121-260	CQ921M TAPC 100V 0.1U-J
C157	31507-127-010	ECQ B1H 473JF3	C253	31417-318-222	CK45 TAPC B50V 222-K
C158	31607-401-470	CE04W TAPC 16V 100M VENT	C255	31607-402-240	CE04W TAPC 50V 4.7M
C160	31507-127-008	ECQ B1H 223JF3	C256	31607-401-470	CE04W TAPC 16V 100M VENT

Loc No	Supplier Part No.	Description	Loc No	Supplier Part No.	Description
C257	31607-402-240	CE04W TAPG 50V 4.7M	C518	31407-106-260	CC45 TAPG RH 50V 101-J
C301	31607-402-290	CE04W TAPG 50V 100M-M(SG	C519	31417-109-140	CK45 TAPG F 50V 103-Z
C302	31507-121-010	CQ921M TAPG 100V 0.001M-J	C520	31417-109-140	CK45 TAPG F 50V 103-Z
C303	31507-121-140	CQ921M TAPG 100V 0.01M-J	C521	31417-109-140	CK45 TAPG F 50V 103-Z
C304	31607-402-710	CE04W TAPG 35V 1000M-M	C522	31607-401-470	CE04W TAPG 16V 100M VENT
C305	31507-121-260	CQ921M TAPG 100V 0.1U-J	C523	31507-127-008	ECQ B1H 223JF3
C306	31609-401-740	CE04W 25V 2200M.VENT	C524	31607-401-460	CE04W TAPG 16V 47M
C307	31607-402-200	CE04W TAPG 50V 0.47M	C525	31607-402-240	CE04W TAPG 50V 4.7M
C310	31507-121-140	CQ921M TAPG 100V 0.01M-J	C526	31507-127-016	ECQ B1H 472JF3
C311	31509-121-620	CQ921M 100V 0.22M-K	C527	31507-127-016	ECQ B1H 472JF3
C312	31407-106-760	CC45 TAPG RH 50V 151-J	C528	31407-105-150	CC45 TAPG CH 50V 160-J
C313	31607-402-220	CE04W TAPG 50V 2.2M	C529	31407-047-271	CC45 TAPG RH 50V 271-J
C314	31607-402-070	CE04W TAPG 35V 22M	C534	31607-402-210	CE04W TAPG 50V 1M
C315	31507-121-260	CQ921M TAPG 100V 0.1U-J	C535	31607-402-210	CE04W TAPG 50V 1M
C316	31607-402-550	CE04W 50V 6.8U-M	C536	31407-106-260	CC45 TAPG RH 50V 101-J
C401	31417-104-070	CK45 TAPG B 50V 271-K	C537	31407-106-260	CC45 TAPG RH 50V 101-J
C402	31407-106-250	CC45 TAPG SL 50V 331-J	C538	31407-106-250	CC45 TAPG SL 50V 331-J
C403	31507-121-150	CQ921M TAPG 100V 0.015M	C539	31417-104-220	CK45 TAPG B 50V 221-K
C404	31507-121-050	CQ921M TAPG 100V 0.0022-J	C540	31417-104-220	CK45 TAPG B 50V 221-K
C405	31417-767-331	CK45 TAPG B2KV 331-K	C541	31507-127-008	ECQ B1H 223JF3
C406	31509-391-020	CQ922M 1600V 0.0033-J	C542	31507-127-008	ECQ B1H 223JF3
C407	31509-391-020	CQ922M 1600V 0.0033-J	C601	31607-401-680	CE04W TAPG 25V 100U
C408	31607-403-490	CE04W TAPG 250V 10M-M	C602	31607-401-720	CE04W TAPG 25V 1000M-M
C409	31609-402-370	CE04W 35V 470M (-40+105G	C603	31519-006-130	CFS922M 100V 0.22-K
C410	31607-403-450	CE04W TAPG 250V 1M	C604	31607-401-720	CE04W TAPG 25V 1000M-M
C411	31509-335-190	CQ922M 200V 0.43M-J	C605	31607-401-720	CE04W TAPG 25V 1000M-M
C412	31609-402-370	CE04W 35V 470M (-40+105G	C606	31607-401-680	CE04W TAPG 25V 100U
C413	31519-003-020	CFS922M 400V 0.1-K	C607	31519-006-130	CFS922M 100V 0.22-K
C421	31607-401-490	CE04W TAPG 16V 330M-M(SG	C608	31607-401-460	CE04W TAPG 16V 47M
C422	31417-901-660	CK45 TAPG B1KV 222-K	C609	31507-127-002	ECQ B1H 222JF3
C423	31507-121-260	CQ921M TAPG 100V 0.1U-J	C610	31607-401-670	CE04W TAPG 25V 47M
C424	31519-101-100	DSR 50V 0.0027 U-J	C611	31507-127-002	ECQ B1H 222JF3
C425	31607-401-460	CE04W TAPG 16V 47M	C612	31607-401-460	CE04W TAPG 16V 47M
C426	31507-121-220	CQ921M TAPG 100V 0.047M-M	C621	31607-902-250	CE04W TAPG 50V 0.22M
C427	31417-901-180	CK45 TAPG B2KV 271-K	C623	31607-401-720	CE04W TAPG 25V 1000M-M
C501	31417-318-222	CK45 TAPG B50V 222-K	C624	31607-902-250	CE04W TAPG 50V 0.22M
C502	31607-402-210	CE04W TAPG 50V 1M	C625	31607-902-250	CE04W TAPG 50V 0.22M
C503	31507-127-010	ECQ B1H 473JF3	C626	31607-402-220	CE04W TAPG 50V 2.2M
C504	31519-002-540	CFS922M 100V 0.33-K	C627	31607-902-250	CE04W TAPG 50V 0.22M
C506	31507-127-008	ECQ B1H 223JF3	C628	31607-402-220	CE04W TAPG 50V 2.2M
C507	31417-109-100	CK45 TAPG F 50V 102-Z	C629	31607-402-170	CE04W TAPG 50V 0.1U-L,L
C508	31407-106-260	CC45 TAPG RH 50V 101-J	C630	31607-902-250	CE04W TAPG 50V 0.22M
C511	31417-104-220	CK45 TAPG B 50V 221-K	C632	31607-902-250	CE04W TAPG 50V 0.22M
C512	31417-104-220	CK45 TAPG B 50V 221-K	C642	31607-402-230	CE04W TAPG 50V 3.3M
C513	31407-105-300	CC45 TAPG CH 50V 680-J	C643	31607-402-240	CE04W TAPG 50V 4.7M
C514	31407-105-180	CC45 TAPG CH 50V 220-J	C644	31607-402-070	CE04W TAPG 35V 22M
C515	31407-047-121	CC45 TAPG RH 50V 121-J	C645	31607-402-240	CE04W TAPG 50V 4.7M
C516	31407-105-180	CC45 TAPG CH 50V 220-J	C646	31607-402-530	CE04W TAPG 50V 0.47U-NP
C517	31407-105-300	CC45 TAPG CH 50V 680-J	C647	31607-402-530	CE04W TAPG 50V 0.47U-NP

Loc No	Supplier Part No.	Description	Loc No	Supplier Part No.	Description
C648	31607-402-230	CE04W TAPG 50V 3.3M	D251	32167-401-800	EQA02-06A/MT25.6B(TAPG)
C650	31607-402-170	CE04W TAPG 50V 0.1U-L,L	D252	32167-406-480	IN4148 TAPG
C651	31507-127-002	ECQ B1H 222JF3	D253	32167-406-480	IN4148 TAPG
C652	31507-127-002	ECQ B1H 222JF3	D301	32167-201-070	IN4003 TAPG
C801	31469-502-220	CK 45P E250V 222-Z(T1.5K	D302	32167-401-630	EQA02-12A
C802	31469-502-220	CK 45P E250V 222-Z(T1.5K	D401	32167-201-160	TVR06G(TAPG)
C803	31469-502-220	CK 45P E250V 222-Z(T1.5K	D402	32167-208-550	ERC 24-06 TAPG
C804	31469-502-220	CK 45P E250V 222-Z(T1.5K	D403	32167-201-160	TVR06G(TAPG)
C807	31609-964-151	CE04W 400V 150U	D405	32167-201-070	IN4003 TAPG
C808	31607-401-670	CE04W TAPG 25V 47M	D406	32167-201-070	IN4003 TAPG
C809	31507-121-110	CQ921M TAPG 100V 0.0056M	D602	32167-406-480	IN4148 TAPG
C810	31509-337-770	CQ922M 400V 0.0082-J	D603	32167-406-480	IN4148 TAPG
C811	31607-401-470	CE04W TAPG 16V 100M VENT	D699	32167-406-480	IN4148 TAPG
C812	31607-402-210	CE04W TAPG 50V 1M	D801	32167-201-180	M100J(TAPG)
C813	31607-401-470	CE04W TAPG 16V 100M VENT	D802	32167-201-180	M100J(TAPG)
C814	31509-391-090	CQ922M 1600V 0.0022-J	D803	32167-201-180	M100J(TAPG)
C815	31417-901-180	CK45 TAPG B2KV 271-K	D804	32167-201-180	M100J(TAPG)
C816	31407-106-260	CC45 TAPG RH 50V 101-J	D805	32167-208-550	ERC 24-06 TAPG
C817	31469-504-060	ECK-DNS472MEX/E400V 472K	D807	32167-208-550	ERC 24-06 TAPG
C818	31469-504-060	ECK-DNS472MEX/E400V 472K	D809	32167-208-550	ERC 24-06 TAPG
C819	31607-401-720	CE04W TAPG 25V 1000M-M	D811	32167-208-550	ERC 24-06 TAPG
C822	31417-767-331	CK45 TAPG B2KV 331-K	D812	32167-208-550	ERC 24-06 TAPG
C823	31607-402-110	CE04W TAPG 35V 220M-M	D814	32167-208-550	ERC 24-06 TAPG
C824	31417-109-140	CK45 TAPG F 50V 103-Z	D815	32167-208-550	ERC 24-06 TAPG
C825	31607-402-480	CE04W TAPG 50V 47-W(+20-	D825	32167-201-070	IN4003 TAPG
C827	31609-403-140	CE04W 160V 220U-M	D826	32119-101-360	KA 33V(TAPG)
C828	31417-767-331	CK45 TAPG B2KV 331-K	IC101	32119-101-380	TDA8341/N6
C831	31417-767-331	CK45 TAPG B2KV 331-K	IC102	32119-101-240	T9A2556/V2
C832	31417-901-180	CK45 TAPG B2KV 271-K	IC103	32119-101-250	TDA3803A/V2,V3
C836	31607-402-210	CE04W TAPG 50V 1M	IC201	32119-501-020	TDA3505/V9
C841	31569-204-190	250V 0.47M/KNB 1530	IC202	32119-101-010	TEA2014
C842	31569-204-190	250V 0.47M/KNB 1530	IC301	32119-101-610	TDA3653B/N1
CF01	31407-105-260	CC45 TAPG CH 50V 470-J	IC302	32119-101-460	TDA2579A/N8
CF02	31407-105-260	CC45 TAPG CH 50V 470-J	IC501	32119-501-010	TDA4555/V8
CRL801	31419-901-370	CK45B 1KV 103-Z	IC502	32119-101-650	TDA4565/V6
VC101	31829-105-610	TZ03P 450E	IC601	32119-102-730	AN5836
SEMICONDUCTORS					
D100	32167-401-630	EQA02-12A	IC602	32119-103-110	TA 7270P
D191	32167-406-080	MTZ 5.1B	IC603	32109-301-900	CD4066BCN
D199	32167-401-810	EQA02-06E/MTZ6.2C(TAPG)	IC801	32119-401-010	TDA4601
D201	32167-406-480	IN4148 TAPG	P801	32189-609-330	PTH451C028C360N270
D202	32167-406-480	IN4148 TAPG	P802	32189-102-030	P2462-J29/J29-P190-A20
D203	32167-401-630	EQA02-12A	Q101	32139-301-090	ZSC 388-A
D204	32167-401-630	EQA02-12A	Q203	32137-301-550	KSC 2331-0(TAPG)
D205	32167-401-630	EQA02-12A	Q252	32137-401-530	KSA 539-Y(TAPG)
D206	32167-406-480	IN4148 TAPG	Q401	32149-301-050	ZSD1555
			Q402	32137-301-550	KSC 2331-0(TAPG)
			Q502	32137-301-530	KSC 2330-0(TAPG)
			Q503	32137-301-530	KSC 2330-0(TAPG)
			Q801	32149-301-010	ZSC3552/WITH,ACC

Loc No	Supplier Part No.	Description	Loc No	Supplier Part No.	Description
Q803	32119-901-110	MC7812C (AUTO)	CNA10	33347-108-310	67094-003(AUTO)
COILS			CNA11A	33347-108-310	67094-003(AUTO)
L101	32429-014-020	1.3UH-K	D-COIL	32479-029-180	28RT130L1280
L120	32709-024-310	38.9MHZ/0.17UH	F-CLIP	33164-700-220	PBP-3 1/2H TO.4 SN
L121	32429-834-010	5.6MH-J	F801	34709-084-730	FST 250V 3.15A 20MM SEMK
L122	32427-805-450	12UH-K TAPC	JA01	33134-103-030	HXC-1510-01-300A
L123	32709-024-320	38.9MHZ/0.36UH	L804	34047-019-060	3.5X6X1.0
L124	32427-803-130	10UH-K TAPC	L814	34047-019-060	3.5X6X1.0
L150	32709-024-270	5.5MHZ/5.74MHZ	RL801	34729-002-010	JC 2A DC 12V
L151	32709-024-270	5.5MHZ/5.74MHZ	SW801	33529-150-160	70060-004 ME5
L152	32427-805-110	1UH-M	SWA07	33529-201-001	JDPB 215
L153	32709-024-240	35MHZ	TU001	34519-990-090	ECC-2885PD(P)
L170	32709-024-250	54.68KHZ	X101	34539-070-210	HC-18/U.8.86723MHZ
L171	32427-803-130	10UH-K TAPC	Z101	34529-440-030	OFW C 3203
L202	32709-024-260	4MHZ	Z102	34527-460-011	TPSG.5HBTf21
L401	32427-805-110	1UH-M	Z103	34529-460-010	TPSS.5MW
L405	32429-805-980	6800UH-K	Z150	34529-439-810	SFE 5.5MC
L450	32449-712-010	K-10/195UH	Z151	34529-439-910	SFE 5.74MC
L501	32427-803-410	8.2UH-M	Z153	34529-439-910	SFE 5.74MC
L502	32769-110-610	119LN-K6190Y	2 . ASSY - PWB REMOCON		
L504	32769-110-610	119LN-K6190Y	*3D31-00548-060 RM104,MTTS2,CX558WT		
L505	32769-110-610	119LN-K6190Y	PWB	33004-143-841	164.5X169X1.6T (S.N.A)
L506	32769-110-610	119LN-K6190Y	RESISTORS		
L507	32427-805-450	12UH-K TAPC	RR01	31018-277-101	RD 1/4T 100-J
L508	32769-110-710	113GN-K5037BY	RR02	31018-277-101	RD 1/4T 100-J
L509	32427-805-500	33UH-K TAPC	RR03	31018-277-101	RD 1/4T 100-J
L801	32429-633-090	39MHX2(U)	RR04	31018-277-471	RD 1/4T 470-J
L803	32429-226-160	4.7UH-K	RR05	31018-277-471	RD 1/4T 470-J
L805	32429-226-290	22UH(1A)	RR06	31018-277-471	RD 1/4T 470-J
L808	32429-226-080	1UH-K	RR07	31018-277-471	RD 1/4T 470-J
T401	32849-020-010	50MH,K-16	RR08	31018-277-471	RD 1/4T 470-J
T444	32859-154-057	FCM-2012L02	RR09	31018-277-471	RD 1/4T 470-J
T801	32899-002-220	P:160/260V S:125/20/16.5	RR10	31018-277-471	RD 1/4T 470-J
X501	32469-106-060	SDL-145(G.T.E)	RR11	31018-277-471	RD 1/4T 470-J
MISCELLANEOUS			RR12	31018-277-471	RD 1/4T 470-J
CNA01	33347-108-140	67094-006 (AUTO)	RR13	31018-277-470	RD 1/4T 47-J
CNA02	33347-108-110	67094-007 (AUTO)	RR14	31018-277-222	RD 1/4T 2.2K-J
CNA03	33347-108-140	67094-006 (AUTO)	RR15	31018-277-222	RD 1/4T 2.2K-J
CNA03	33347-108-180	67094-005 (AUTO)	RR16	31018-277-105	RD 1/4T 1M-J
CNA04	33347-108-180	67094-005 (AUTO)	RR17	31018-277-103	RD 1/4T 10K-J
CNA06	33347-108-180	67094-005 (AUTO)	RR18	31018-277-103	RD 1/4T 10K-J
CNA08	33347-108-140	67094-006 (AUTO)			
CNA09	33347-114-810	YW025-04(AUTO)			

Loc No	Supplier Part No.	Description	Loc No	Supplier Part No.	Description
RR19	31018-277-332	RD 1/4T 3.3K-J	TR25	31018-277-563	RD 1/4T 56K-J
RR20	31018-277-221	RD 1/4T 220-J	TR26	31018-277-331	RD 1/4T 330-J
RR21	31018-277-472	RD 1/4T 4.7K-J	TR27	31018-277-303	RD 1/4T 30K-J
RR22	31018-277-822	RD 1/4T 8.2K-J	TR28	31018-277-153	RD 1/4T 15K-J
RR24	31018-277-152	RD 1/4T 1.5K-J	TR29	31018-277-332	RD 1/4T 3.3K-J
RR25	31018-277-103	RD 1/4T 10K-J	TR30	31018-277-181	RD 1/4T 180-J
RR26	31018-277-103	RD 1/4T 10K-J	TR31	31018-277-471	RD 1/4T 470-J
RR27	31018-277-473	RD 1/4T 47K-J	TR33	31018-277-202	RD 1/4T 2K-J
RR28	31018-277-102	RD 1/4T 1K-J	TR34	31018-277-103	RD 1/4T 10K-J
RR29	31018-277-103	RD 1/4T 10K-J	TR35	31018-277-202	RD 1/4T 2K-J
RR30	31018-277-562	RD 1/4T 5.6K-J	TR36	31018-277-223	RD 1/4T 22K-J
RR31	31018-277-683	RD 1/4T 68K-J	TR37	31018-277-472	RD 1/4T 4.7K-J
RR32	31018-277-105	RD 1/4T 1M-J	CAPACITORS		
RR33	31018-277-473	RD 1/4T 47K-J	RC01	31407-057-330	CC45 TAPC CH 50V 330-J
RR34	31018-277-104	RD 1/4T 100K-J	RC02	31407-057-330	CC45 TAPC CH 50V 330-J
RR36	31018-277-393	RD 1/4T 39K-J	RC03	31607-402-220	CE04W TAPC 50V 2.2M
RR38	31018-277-433	RD 1/4T 43K-J	RC04	31607-401-840	CE04W TAPC 10V 100M-M
RR39	31018-277-822	RD 1/4T 8.2K-J	RC05	31519-002-580	CFS922M 100V 1.5U-J
RR40	31018-277-683	RD 1/4T 68K-J	RC06	31507-121-200	CQ921M TAPC 100V 0.033M-
RR41	31018-277-152	RD 1/4T 1.5K-J	RC07	31407-057-330	CC45 TAPC CH 50V 330-J
RR42	31018-277-102	RD 1/4T 1K-J	RC08	31507-121-220	CQ921M TAPC 100V 0.047M-
RR43	31018-277-163	RD 1/4T 16K-J	RC09	31417-318-222	CK45 TAPC B50V 222-K
RR44	31018-277-163	RD 1/4T 16K-J	RC10	31607-401-500	CE04W TAPC 16V 470M-M(SC
RR45	31018-277-223	RD 1/4T 22K-J	RC12	31607-402-210	CE04W TAPC 50V 1M
RR46	31018-277-473	RD 1/4T 47K-J	RC13	31609-401-140	CE04W 6.3V 1000M
RR47	31049-315-479	RS 2P 4.7-J	RC14	31417-109-140	CK45 TAPC F 50V 103-Z
RR48	31049-527-820	RS 2P 82-J	RC51	31507-121-260	CQ921M TAPC 100V 0.1U-J
RR49	31018-277-103	RD 1/4T 10K-J	RCN01	31499-009-420	NCYFIH102M09
RR50	31018-277-682	RD 1/4T 6.8K-J	TC01	31407-106-200	CC45 TAPC RH50V 270-J
TRO2	31018-277-105	RD 1/4T 1M-J	TC02	31407-106-200	CC45 TAPC RH50V 270-J
TRO3	31018-277-222	RD 1/4T 2.2K-J	TC03	31607-402-220	CE04W TAPC 50V 2.2M
TRO4	31018-277-182	RD 1/4T 1.8K-J	TC05	31507-121-180	CQ921M TAPC 100V 0.022M-
TRO5	31018-277-103	RD 1/4T 10K-J	TC06	31407-106-150	CC45 TAPC RH 50V 150-J
TRO6	31018-277-823	RD 1/4T 82K-J	TC07	31417-104-400	CK45 TAPC B 50V 102-K
TRO7	31018-277-472	RD 1/4T 47K-J	TC08	31417-104-250	CK45 TAPC B 50V 471-K
TRO8	31018-277-332	RD 1/4T 3.3K-J	TC09	31417-104-070	CK45 TAPC B 50V 271-K
TRO9	31018-277-222	RD 1/4T 2.2K-J	TC10	31407-105-660	CC45 TAPC CH 50V 101-J
TR10	31018-277-470	RD 1/4T 47-J	TC11	31407-106-150	CC45 TAPC RH 50V 150-J
TR12	31018-277-332	RD 1/4T 3.3K-J	TC12	31407-106-200	CC45 TAPC RH50V 270-J
TR13	31018-277-470	RD 1/4T 47-J	TC14	31607-402-220	CE04W TAPC 50V 2.2M
TR14	31018-277-222	RD 1/4T 2.2K-J	TC15	31507-121-240	CQ921M TAPC 100V 0.068M-
TR16	31018-277-470	RD 1/4T 47-J	TC16	31407-047-221	CC45 TAPC RH 50V 221-J
TR17	31018-277-272	RD 1/4T 2.7K-J	TC17	31507-121-220	CQ921M TAPC 100V 0.047M-
TR18	31018-277-222	RD 1/4T 2.2K-J	TC18	31407-106-150	CC45 TAPC RH 50V 150-J
TR19	31018-277-470	RD 1/4T 47-J	TC19	31507-121-220	CQ921M TAPC 100V 0.047M-
TR21	31018-277-511	RD 1/4T 510-J	TC23	31607-401-460	CE04W TAPC 16V 47M
TR22	31018-277-391	RD 1/4T 390-J			

Loc No	Supplier Part No.	Description	Loc No	Supplier Part No.	Description
5 . A S S Y - C R T					
*3D70-00066-040 21" IR FST					
CRT	32019-255-103	54CCB98X			
DY	32439-310-028	DSE-2192GL			
CY	34099-023-010	JH-8210			
SP-DY	36814-101-911	NEOPRENE VO BLK			
6 . A S S Y - T R A N S M I T T E R					
*3F14-00022-040 TM22,RMI04,48,BLK,NO					
PWB	33004-441-251	158X54X1.0T (S.N.A)			
XC01	31409-105-110	CC45 CH 50V 120-J			
XC02	31407-105-280	CC45 TAPG CH 50V 560-J			
XC03	31602-401-460	CE04W TAPG 16V 47M			
XD01	32167-406-480	1N4148 TAPG			
XD02	32167-406-480	1N4148 TAPG			
XD03	32309-101-090	CL-2(F)/SSIR-5D			
XIC01	32109-201-350	SAA3004P			
XJ01	30509-400-116	TA 0.6 SN			
XQ01	32137-301-720	KSC 815-Y (TAPG)			
XRO1	31018-277-279	RD 1/4T 2.7-J			
XRO2	31018-277-279	RD 1/4T 2.7-J			
XZ01	34539-050-010	CSB455EBL/KBR455BRTL			